SANITARY SEWER AND WATERLINE IMPROVEMENTS

TO SERVE

NORTH JUNCTION

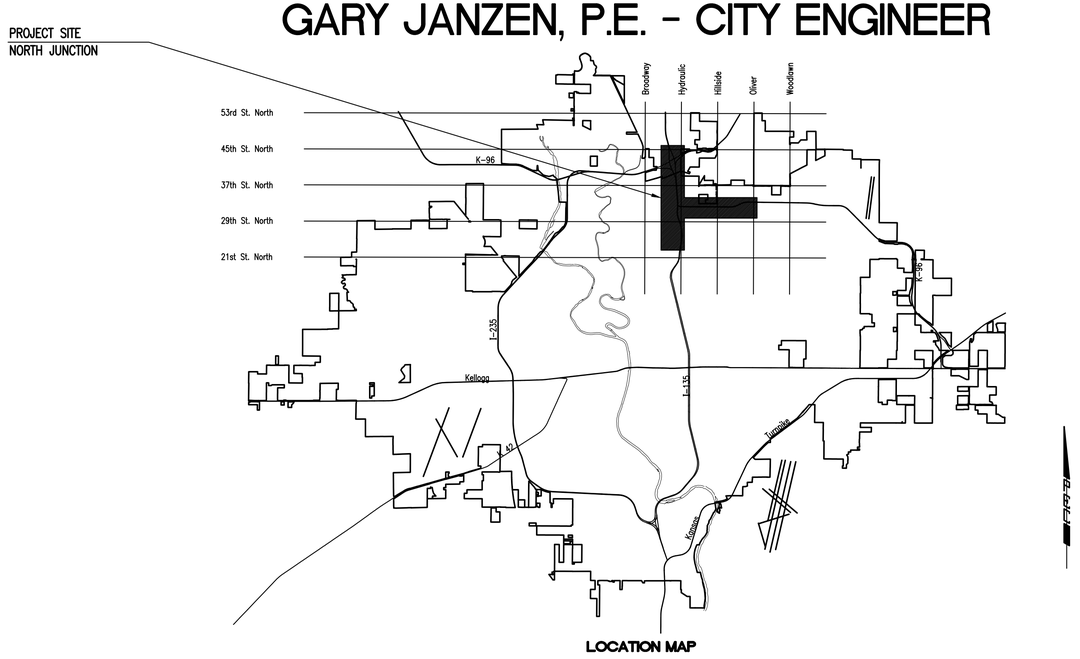
UTILITY RELOCATION

SANITARY SEWER: CITY OF WICHITA ENGINEERING PROJECT NO. 468-2021-002929
ORG CODE 53200020, MUNIS NO. S0029

WATERLINE: CITY OF WICHITA ENGINEERING PROJECT NO. 448-2021-034139
ORG CODE 54250320, MUNIS NO. W0030

CITY OF WICHITA, KANSAS

GARY JANZEN, P.E. - CITY ENGINEER



INDEX OF SHEETS

SHEET NUMBER	SHEET TITLE
CU001	TITLE SHEET
CU002	GENERAL NOTES
CU003	OVERALL KEY MAP
CU100	SANITARY SEWER KEY MAP, CONTROL, & BUBBLE MAP
CU101	SANITARY SEWER ADJUSTMENT NO. 1
CU102	SANITARY SEWER ADJUSTMENT NO. 4
CU103	SANITARY SEWER LINE NO. 1
CU104	SANITARY SEWER SERVICE LINE NO. 1
CU200	PRECAST SANITARY SEWER MANHOLE
CU201	MANHOLE FRAME AND COVER DETAILS
CU202	VERTICAL RISER ASSEMBLY SEWER DETAIL
CU300	WATER LINE NO. 1 KEY MAP, CONTROL, & BUBBLE MAP
CU301	WATER LINE NO. 2 KEY MAP, CONTROL, & BUBBLE MAP
CU302	WATERLINE NO. 1
CU303	WATERLINE NO. 1 - VALVES
CU304 THRU CU306	WATERLINE NO. 2
CU400	STANDARD WATER ASSEMBLY DETAIL
CU401	MISCELLANEOUS WATER DETAILS
CU402	STANDARD WATER SERVICE DETAIL
CU500 THRU CU504	EROSION CONTROL DETAILS
CT101	37TH STREET TRAFFIC CONTROL PLAN
CT102 THRU CT105	HYDRAULIC AVE TRAFFIC CONTROL PLAN

SEPTEMBER 2022

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

CITY OF WICHITA

TREVOR KAUFMAN LICENSED 26008 09/14/2022 KANSAS PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

TITLE SHEET

CU001

SAVED 9/13/2022 2:41:25 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 2:41:44 PM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNIDRAWINGS\210253-000-CU001.DWG

SANITARY SEWER: CITY OF WICHITA PROJECT NO. 468-002929
WATERLINE: CITY OF WICHITA PROJECT NO. 448-034139

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
BLACK HILLS ENERGY:	800-694-8989
CITY OF WICHITA WATER & SEWER	316-219-8921
CITY OF WICHITA STORMWATER	316-268-4090
CITY OF WICHITA TRAFFIC	316-268-4034

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. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEY OR IN ACCORDANCE WITH STATE LAWS.

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

12. THE CONTRACTOR SHALL CONTAIN THEIR OPERATIONS TO PERMIT LOCAL AND EMERGENCY TRAFFIC THROUGH AND ACROSS CONSTRUCTION AT ALL TIMES. THE CONTRACTOR SHALL UTILIZE WARNING SIGNS, FLASHING LIGHTS, BARRICADES, AND FLAGMEN IN COMPLIANCE WITH THE LATEST VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

13. 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 ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL ALSO BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A 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.

14. 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. FULL TREE REMOVAL SHALL BE NOTED ON THE PLANS AND SHALL BE BID AS "TREE REMOVED, LARGE", "TREE REMOVED SMALL", OR "TREE ROW REMOVED".

15. 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.

16. 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. THE FOLLOWING QUANTITIES ARE ESTIMATED, AND SHOULD BE CONSIDERED THE MINIMUM EFFORT REQUIRED.

SILT FENCE BARRIER 444 L.F.
CURB INLET PROTECTION 1 EACH
DITCH CHECK 6 EACH

17. 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.

18. 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.

19. ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCHING, AND/OR RE-SEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AR6.5 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO "SITE RESTORATION".

20. 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.

21. OWNER SHALL BE RESPONSIBLE FOR CONSTRUCTION STAKING. STAKING AND BENCH MARKS DESTROYED DURING CONSTRUCTION OPERATIONS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

22. CONTRACTOR SHALL MAINTAIN UNINTERRUPTED UTILITY SERVICE TO ADJACENT FACILITIES DURING CONSTRUCTION, UNLESS OTHERWISE APPROVED BY OWNER.

23. WRITTEN REQUEST TO THE OWNER WILL BE REQUIRED 72 HOURS PRIOR TO A SCHEDULED UTILITY OUTAGE. THE FIRE DEPARTMENT MUST BE NOTIFIED OF ANY FIRE HYDRANTS OR WATER MAINS TAKEN OUT OF SERVICE.

24. PROPERTIES WITHIN THE PROJECT LIMITS MAY HAVE UNDERGROUND SPRINKLER SYSTEMS IN PUBLIC RIGHT-OF-WAY WHICH CONFLICT WITH NEW CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO REMOVE SUCH IMPROVEMENTS SHOULD THEY NOT BE REMOVED BY THEIR OWNER AT THE TIME OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL REMOVE, REPLACE OR RESET ANY SPRINKLER HEADS, PIPES, AND/OR VALVES WHICH CONFLICT WITH CONSTRUCTION. ANY SPRINKLER HEADS, PIPES, AND/OR VALVES DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST TO THE OWNER. PORTIONS OF UNDERGROUND SPRINKLER SYSTEMS NOT IN CONFLICT WITH NEW CONSTRUCTION SHALL BE PROTECTED FROM DAMAGE AND SHALL REMAIN IN PLACE.

25. PERMITS THAT HAVE BEEN OBTAINED BY THE OWNER ARE LISTED BELOW. THE CONTRACTOR SHALL MEET ALL PERMITTING REQUIREMENTS.

- HIGHWAY PERMIT/USE OF RIGHT OF WAY (KDOT)

THE CONTRACTOR SHALL OBTAIN ALL ADDITIONAL LOCAL, STATE, AND FEDERAL PERMITS REQUIRED FOR CONSTRUCTION ACTIVITIES.

26. THE OWNER HAS ACQUIRED ALL NECESSARY KDOT PERMITS FOR RIGHT-OF-WAY ENCROACHMENTS. ANY PROPOSED ALIGNMENT CHANGE OR VARIANCE OF CONSTRUCTION WITHIN KDOT RIGHT-OF-WAY FROM THESE PLANS WILL REQUIRE A NEW PERMIT APPLICATION TO BE SUBMITTED BY THE CONTRACTOR TO KDOT FOR APPROVAL PRIOR TO CONSTRUCTION. THE CONTACT INFORMATION IS SHOWN BELOW:

NATHANIEL STAHLY
UTILITY COORDINATOR
OFFICE: (316) 744-1271 EXT. 206
CELL: (316) 217-0367
FAX: (316) 744-3064
EMAIL: NATE.STAHLY@KS.GOV

THE CONTRACTOR SHALL INCLUDE A CERTIFICATE OF LIABILITY OF INSURANCE IN ACCORDANCE WITH THE KDOT USE OF RIGHT OF WAY PERMIT WITH THE CONTRACT WHEN SUBMITTED TO THE OWNER. CONTRACTOR WILL BE REQUIRED TO MEET ALL PERMIT REQUIREMENTS.

27. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.

28. THE CONTRACTOR SHALL NOT BURY MANHOLES OR CLEANOUTS THAT HAVE TOP ELEVATIONS WHICH ARE LOWER THAN EXISTING GROUND. THE GROUND AROUND SUCH MANHOLES AND CLEANOUTS AND ALONG THE SEWER ALIGNMENT SHALL BE BACKFILLED TO THE APPROXIMATE ELEVATION OF THE PROPOSED GROUND ELEVATION SHOWN ON THE PLAN/PROFILE SHEETS. THE CONTRACTOR SHALL PROVIDE DRAINAGE AWAY FROM THESE MANHOLES OR CLEANOUTS AND SEWER LINES BY CONSTRUCTION OF TEMPORARY DITCHES OR SLOPING THE GROUND AS REQUIRED.

29. THE CONTRACTOR SHALL PROVIDE MOUNDED EARTH AT MANHOLES AND CLEANOUTS THAT HAVE TOP ELEVATIONS GREATER THAN 1 FOOT ABOVE FINISHED GRADE, AS SHOWN ON THE DRAWINGS.

30. THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AWAY FROM ALL MANHOLE COVERS.

31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING CONTINUOUS FLOW OF SEWAGE THROUGH CONSTRUCTION. CONTRACTOR'S PROPOSED METHOD FOR MAINTAINING SEWAGE FLOW SHALL BE SUBMITTED AND APPROVED BY THE ENGINEER PRIOR TO STARTING AND BY-PASSING OF SEWAGE FLOWS.

32. THE CONTRACTOR SHALL PREVENT ANY CONSTRUCTION DEBRIS FROM ENTERING THE EXISTING SANITARY SEWER DURING CONSTRUCTION.

33. CONTRACTOR SHALL NOT DIVERT ANY SEWAGE FLOW THROUGH NEW PIPE OR MANHOLES UNTIL TESTING HAS BEEN COMPLETED AND ACCEPTED.

34. CONTRACTOR SHALL POTHOLE ALL UTILITY CROSSINGS A MINIMUM OF 200 FT. AHEAD OF THE EXCAVATION FOR OPEN CUT AND 500 FT. AHEAD OF HDD INSTALLATION. CONTRACTOR TO NOTIFY RPR AND ENGINEER OF ANY CONFLICTS.

35. THE CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL LOCATION, TYPE, SIZE AND CLASS OF EXISTING WATERLINES PRIOR TO MAKING CONNECTIONS. EXISTING WATERLINE LOCATIONS AS SHOWN ON THE DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL MAKE ADJUSTMENTS AS REQUIRED. PROVISION AND INSTALLATION OF PIPE ADAPTORS, SHORT SECTION OF PIPE, AND COUPLERS SHALL BE AT NO ADDITIONAL COST TO THE PROJECT.

36. THE CONTRACTOR MUST SCHEDULE THE CONNECTIONS TO THE EXISTING WATER DISTRIBUTION SYSTEM WITH THE CITY SUCH THAT THERE IS MINIMUM DISRUPTION TO THE SYSTEM.

37. AS REQUIRED, THE CONTRACTOR SHALL INSTALL A TEMPORARY BLOW OFF AND/OR TEMPORARY CONNECTION TO THE EXISTING WATERLINE/SYSTEM PER AWWA C651 RECOMMENDATIONS TO FILL AND TEST THE NEW WATERLINE. AT THE CONTRACTOR'S OPTION, THE CONTRACTOR CAN INSTALL A TEMPORARY MAINLINE VALVE AT THE POINT OF CONNECTION. FOLLOWING ACCEPTANCE OF THE NEW WATERLINE, THE TEMPORARY CONNECTION/VALVE SHALL BE FULLY REMOVED AND THE FINAL CONNECTION TO THE EXISTING WATERLINE SHALL BE CONSTRUCTED. WATERLINE MATERIALS AT TIE-INS SHALL BE CONSTRUCTED WITH CLEAN, SWABBED PIPE AND FLUSHED UPON COMPLETION OF TIE-INS. ALL COSTS FOR TEMPORARY CONNECTIONS SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

38. WATERLINES SHALL HAVE A MINIMUM DEPTH OF BURY OF 42 INCHES, UNLESS SHOWN OTHERWISE.

39. FIRE HYDRANT BURY DEPTHS ARE BASED ON THE TOP ELEVATION OF THE PROPOSED WATER MAIN AND THE APPROXIMATE GROUND ELEVATION AT THE LOCATION OF THE FIRE HYDRANT. THE CONTRACTOR SHALL VERIFY THESE ELEVATIONS PRIOR TO INSTALLING FIRE HYDRANTS. ANY MODIFICATIONS REQUIRED TO THE FIRE HYDRANT BURY DEPTH DUE TO THE CONTRACTOR'S FIELD ADJUSTMENTS TO THE WATER MAIN PROFILE SHALL BE MADE BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. PROPOSED ADJUSTMENTS MUST BE APPROVED BY THE RESIDENT INSPECTOR OR ENGINEER PRIOR TO CONSTRUCTION.

40. CONCRETE THRUST BLOCKING SHALL BE INSTALLED AT ALL HORIZONTAL AND VERTICAL DEFLECTIONS OF 11 1/4 DEGREES OR MORE, UNLESS OTHERWISE SPECIFIED. THRUST BLOCKING SHALL BE SIZED AS SHOWN IN THE DETAILS, OR OTHERWISE SPECIFIED. COSTS FOR CONCRETE THRUST BLOCKING SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

41. CONTRACTOR SHALL ABANDON THE EXISTING WATER MAIN TO THE LIMITS SHOWN ON THE PLAN SHEETS. ALL WATERLINES TO BE ABANDONED SHALL BE CUT AND CAPPED/PLUGGED AS APPROVED BY THE ENGINEER. ANY VALVES/FITTINGS TO BE ABANDONED IN PLACE SHALL BE PROPERLY PLUGGED.

42. THE CONTRACTOR SHALL MINIMIZE SERVICE DISRUPTION TO PROPERTY OWNERS AND SHALL PROVIDE 48 HOURS WRITTEN NOTICE TO ANY PROPERTY OWNERS THAT WILL HAVE A DISRUPTION OF SERVICE.

43. THE CONTRACTOR SHALL MAINTAIN EXISTING WATERLINES IN SERVICE UNTIL THE NEW LINE IS DISINFECTED AND ALL TESTING IS COMPLETE AND APPROVED. ALL SERVICES SHALL THEN BE CONNECTED TO THE NEWLY INSTALLED WATERLINE PRIOR TO ABANDONING THE EXISTING WATERLINE.

44. THE WATERLINE PIPE LENGTHS REPRESENT TRUE PIPE LENGTHS AND DO NOT INCLUDE FITTINGS/APPURTENANCES. THE PIPE LENGTHS DO NOT DIRECTLY CORRESPOND WITH ALIGNMENT STATIONING. THE COST OF FITTINGS IS CONSIDERED SUBSIDIARY TO PIPE.

45. OPENING AND CLOSING WATER VALVES SHALL BE DONE SLOWLY TO PREVENT DAMAGE TO THE WATER DISTRIBUTION SYSTEM FROM WATER HAMMER. ALL VALVES CLOSED BY THE CONTRACTOR MUST BE REOPENED AS NEW CONSTRUCTION PERMITS. PROJECT INSPECTOR MUST ASCERTAIN THAT ANY VALVE CLOSED BY THE CONTRACTOR IS REOPENED. CONTRACTOR WILL BE PERMITTED TO OPERATE WATER VALVES ONLY WHEN THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT.

46. WHERE INDICATED IN THE DRAWINGS, THE SANITARY SEWER EXCAVATION SHALL BE SAND FILLED AND FLUSHED (JETTED AND VIBRATED) WITH WATER PER THE REQUIREMENTS LISTED IN THE STANDARD SPECIFICATIONS FOR THE CITY OF WICHITA, UNLESS FLOWABLE FILL OR OTHER MPROVED BACKFILL MATERIAL IS OTHERWISE SPECIFIED. ALL COSTS FOR SAND FILLING AND FLUSHING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR "JETTED SAND BACKFILL".

47. MAINTAIN A MINIMUM OF 10-FOOT HORIZONTAL SEPARATION BETWEEN ALL WATER LINES (MAINS, SERVICES, AND FIRE HYDRANTS) AND ALL SANITARY SEWER LINES (MAINS, SERVICES, AND MANHOLES). ALL SEPARATIONS DISTANCES ARE TO BE MEASURED FROM EDGE-TO-EDGE, AT THE CLOSEST POINT.

48. MAINTAIN A MINIMUM OF 2-FOOT VERTICAL SEPARATION BETWEEN ALL WATER LINES (MAIN AND SERVICES) AND ALL GRAVITY SANITARY SEWER LINES (MAINS, SERVICES, AND MANHOLES) AT CROSSINGS. ALL SEPARATION DISTANCES ARE TO BE MEASURED FROM EDGE-TO-EDGE, AT THE CLOSEST POINT.

49. MAINTAIN A MINIMUM OF 2-FOOT VERTICAL SEPARATION BETWEEN ALL WATER LINES (MAINS AND SERVICES) AND ALL PRESSURIZED SANITARY SEWER LINES (FORCE MAINS AND SERVICES) AT CROSSINGS. WATERLINES MUST ALWAYS BE PLACED ABOVE PRESSURIZED SANITARY SEWER LINES WHERE THEY CROSS. ALL SEPARATION DISTANCES ARE TO BE MEASURED FROM EDGE-TO-EDGE, AT THE CLOSEST POINT.

UTILITY CONTACTS

JEFF CROSBY
WICHITA SANITARY SEWER
8TH FLOOR - CITY HALL
455 N. MAIN
WICHITA, KS 67202
316-268-4329

GREG LOLLEY
WICHITA WATER
8TH FLOOR - CITY HALL
455 N. MAIN
WICHITA, KS 67202
316-268-4334

KELLY FLEMING
WICHITA STORM SEWER
8TH FLOOR - CITY HALL
455 N. MAIN
WICHITA, KS 67202
316-268-4307

MARC HENDERSON
COX COMMUNICATIONS
ENGINEERING DEPARTMENT
901 GEORGE WASHINGTON BLVD.
WICHITA, KS 67211
316-260-7745

ZACH LAWS
EVERGY
1900 E. CENTRAL (3RD FLOOR)
P.O. BOX 208
WICHITA, KS 67201
316-261-6264

JASON EDWARDS
AT&T WICHITA CENTRAL UNIT
154 N. BROADWAY, ROOM 210
WICHITA, KS 67202
316-268-2008

ANDREA FOUST
KANSAS GAS SERVICE
1021 E. 26TH ST. NORTH
WICHITA, KS 67219
316-832-3126

SUZETTE WILSON & KELLY KRAUS
BLACK HILLS ENERGY
2330 N. HOOVER ROAD
WICHITA, KS 67205
SUZETTE WILSON 316-941-1631
KELLY KRAUS 316-941-1628

SHANE SCHUMACHER
WICHITA PUBLIC SCHOOLS
FACILITIES DIVISION-SCHOOL SERVICE CENTER
3850 N. HYDRAULIC
WICHITA, KS 67219
316-973-2230

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

CITY OF WICHITA

TREVOR KAUFMAN LICENSED 28008 09/14/2022 KANSAS PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

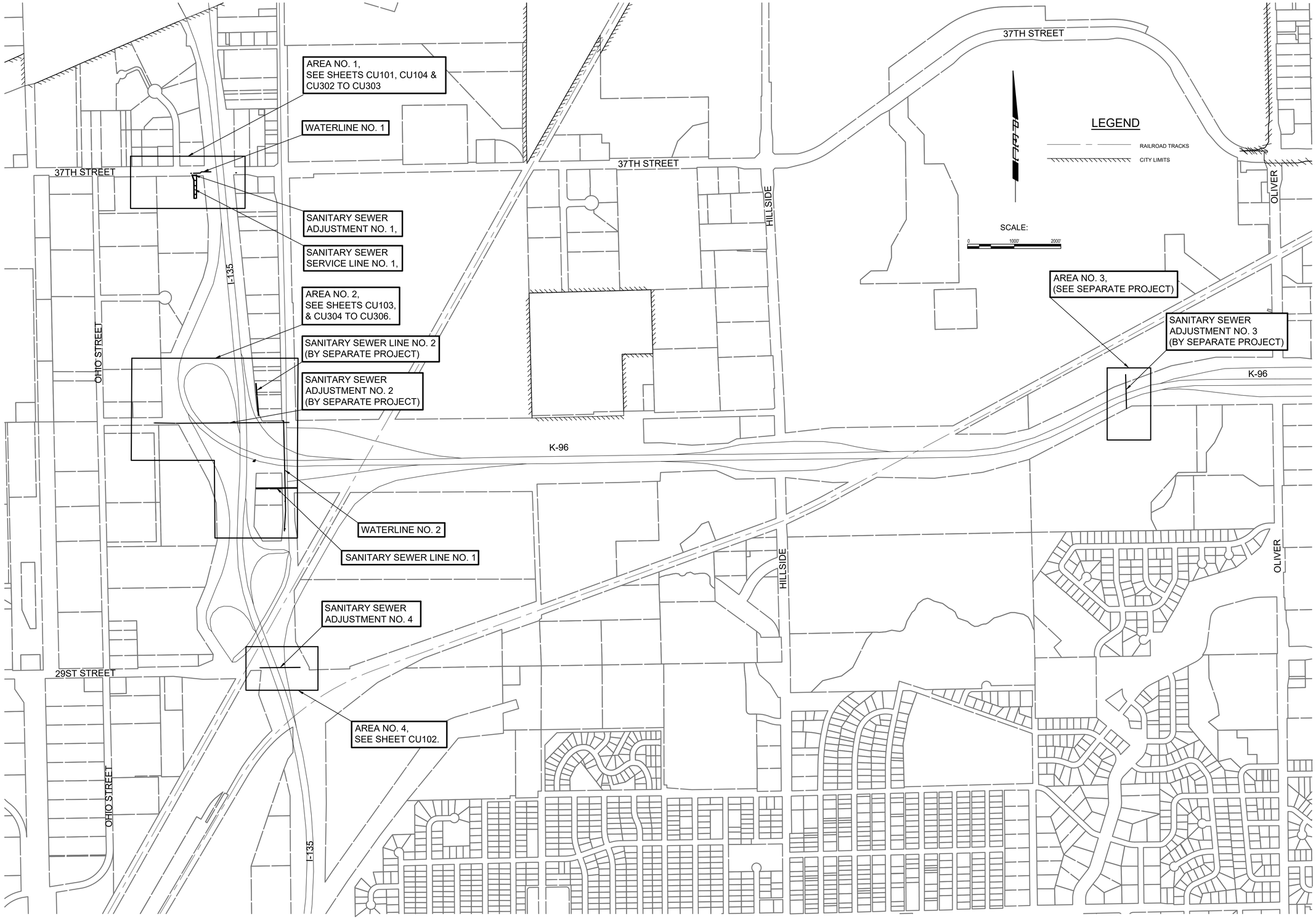
Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

GENERAL NOTES

CU002

SAVED 9/12/2022 2:08:10 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:22:09 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNI\DRAWINGS\210253-000-CU002.DWG



SAVED 9/12/2022 2:13:40 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:22:22 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNIDRAWINGS\210253-000-CU003.DWG

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

CITY OF WICHITA

TREVOR KAUFMAN LICENSED 26008 09/14/2022 KANSAS PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION

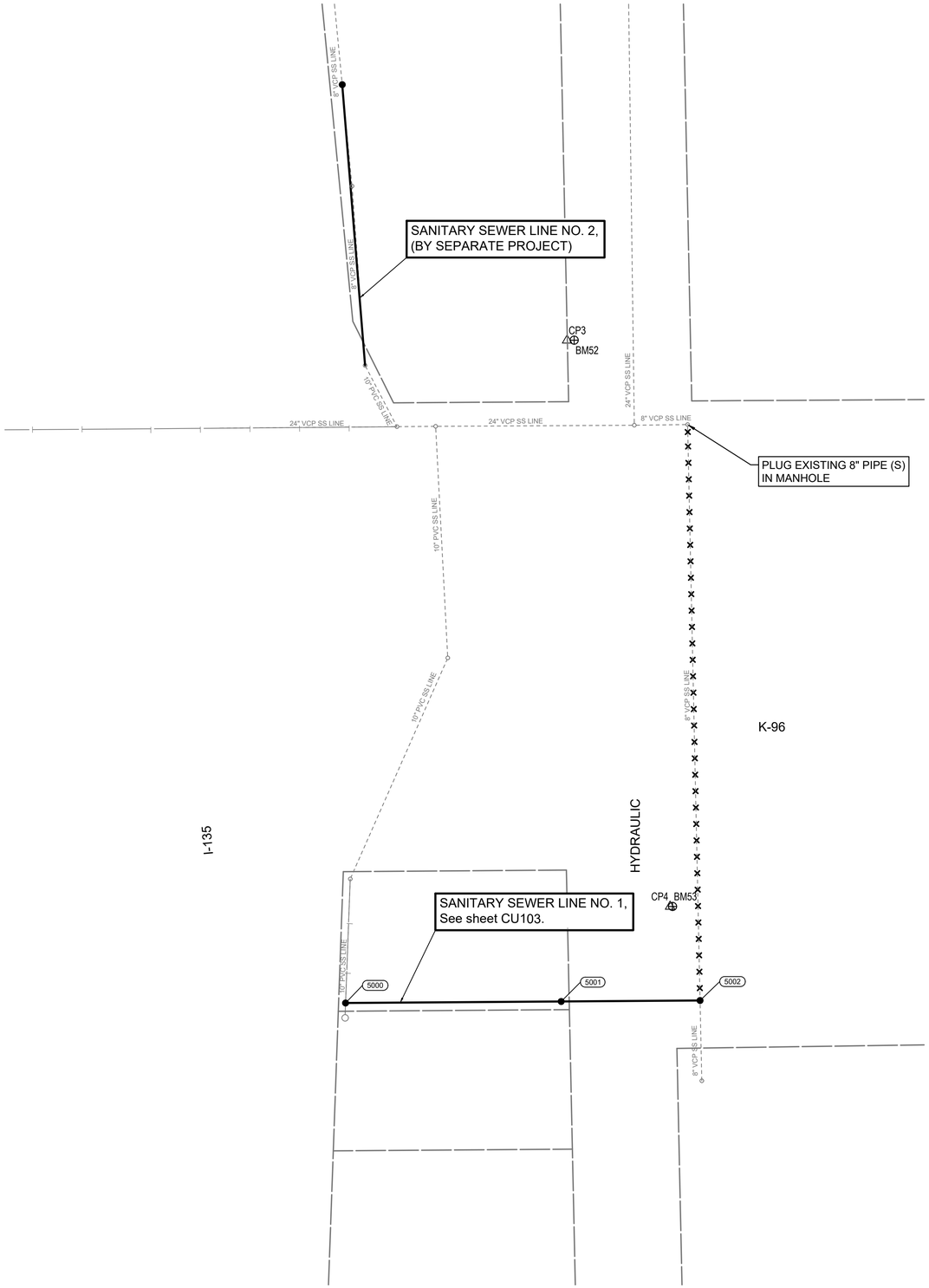
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

OVERALL KEY MAP

CU003



LEGEND

- EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- EXISTING FORCE MAIN
- PROPOSED FORCE MAIN
- ABANDON EXISTING SANITARY SEWER

SCALE:

0 80' 160'

SANITARY SEWER LINE NO. 1				
COORDINATE LIST				
POINT	NORTHING	EASTING	STATION	DESCRIPTION
5000	1,706,551.1980	1,654,143.5728	10+00.00	PROP. SS MH-2
5001	1,706,553.0636	1,654,406.2960	12+63.34	PROP. SS MH-3
5002	1,706,554.2601	1,654,575.5019	14+32.80	PROP. SS MH-4

(5000) = COORDINATE POINT NO.

NOTE:
SANITARY SEWER SERVICE LINE NO. 1 NOT SHOWN ON THIS SHEET.
SEE SHEET NO. CU104 FOR
SANITARY SEWER SERVICE LINE NO. 1 COORDINATES

HORIZONTAL DATUM/COORDINATE SYSTEM: ADJUSTED STATE PLANE COORDINATES NAD 83 KANSAS SOUTH ZONE

PROJECT COORDINATE SYSTEM: (GRID) ON DESCRIBED COORDINATE SYSTEM

VERTICAL DATUM: NAVD 88

BMK 52

CHISELED SQUARE ON A RETAINING WALL, NORTH END OF SOUTH ENTRANCE TO FIRST WIRELESS

EL= 1320.83 (NAVD88)

BMK 53

CHISELED SQUARE ON THE WEST END OF NORTH RETAINING WALL AT EAST BOUND K-96 RAMP AT HYDRAULIC

EL= 1319.55 (NAVD88)

BMK 54 (NOT SHOWN)

CHISELED SQUARE ON THE CENTER OF THE NORTHEAST HEADWALL OF THE ABANDONED SCALE, DIRECTLY SOUTH OF POLE #W7F84558

EL= 1325.61 (NAVD88)

CP-3

N: 1707358.366 E: 1654413.525

MAG NAIL IN THE NORTH SIDE OF THE SOUTH ENTRANCE TO FIRST WIRELESS

1. 15.0' S TO THE CENTERLINE OF THE ENTRANCE

2. 26.5' E TO THE W EDGE OF HYDRAULIC

3. 74.2' SSE TO THE TOP CENTER OF A FIRE HYDRANT

CP-4

N: 1706668.699 E: 1654538.965

1/2" REBAR WITH PEC CONTROL POINT CAP, NORTH SIDE OF EAST BOUND K-96 RAMP AT HYDRAULIC

1. 3.0' E TO A CHISELED SQUARE ON THE WEST END OF THE RETAINING WALL

2. 36.5' W TO THE EAST EDGE OF HYDRAULIC

3. 14.5' S TO THE NORTH EDGE OF K-96 ON-RAMP

CP-5 (NOT SHOWN)

N: 1707245.159 E: 1653219.950

1/2" REBAR WITH PEC CONTROL POINT CAP

1. 5.8' E TO A RAILROAD SPIKE IN THE WEST FACE OF A POWER POLE

2. 30.3' NORTH TO A KDOT RIGHT OF WAY FENCE (EAST/WEST)

3. 62.34' SSE TO A CHISELED SQUARE ON A RETAINING WALL (BM 54)

CP-6 (NOT SHOWN)

N: 1707290.5486 E: 1652531.478

CHISELED CROSS ON THE SOUTHEAST CORNER OF A STORM DRAIN MANHOLE PAD

1. 22.0' S TO THE CENTERLINE OF HAUL ROAD

2. 56.5' W TO THE CENTERLINE OF OHIO STREET

3. 64.9' WSW TO THE NORTHWEST CORNER OF CONCRETE FENCE COLUMN

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

CITY OF WICHITA

TREVOR KAUFMAN LICENSED 26008 09/14/2022 KANSAS PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

SANITARY SEWER KEY MAP, CONTROL, & BUBBLE MAP

CU100

SAVED 9/12/2022 2:24:51 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:22:31 AM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNIDRAWINGS\210253-000-CU100.DWG

LEGEND

- X = DENOTES SANITARY SEWER LINE TO BE ABANDONED IN PLACE.
- = SANITARY SEWER MANHOLE TO BE ABANDONED
- [= DENOTES CAP/PLUG BY THE CONTRACTOR. (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)
- (5000) = SEE SHEET CU104 FOR SANITARY SEWER SERVICE LINE 1 COORDINATES
- = PROPOSED SILT FENCE
- = PROPOSED INLET PROTECTION

PLAN: LAT. & LONG. 0 10' 20' 40'
PROFILE: HORIZ. SAME AS ABOVE
VERT:

SANITARY SEWER SERVICE LINE NO. 1
SEE SHEET NO. CU104

PROPOSED WATER VALVE
SEE SHEET NO. CU303

N: 1,709,902.2437, E: 1,653,454.6677
EXISTING 8" SANITARY SEWER PIPE*
CONSTRUCT MH-1
OVER EXISTING 8" PIPE.
DOGHOUSE MANHOLE
REMOVE TOP HALF OF 8" PIPE THRU MH.
SHAPE INVERT TO PROVIDE SMOOTH FLOW.
PLUG EXISTING 8" PIPE EAST.
MH TOP ELEV.= 1324.71
FL= 1317.86 8" PVC (W)

N: 1,709,902.6250, E: 1,653,502.9520
EXISTING MH
FULLY REMOVE MANHOLE.
BACKFILL IN ACCORDANCE WITH CITY SPECIFICATIONS.

SERVICE ABANDONMENT BY OTHERS
COORDINATE WITH PROPERTY OWNER TO PREVENT LOSS OF SERVICE.

WATERLINE NO. 1
SEE SHEET NO. CU300

(5005) LOTS 1&2 BRIDGEPORT INDUSTRIAL PARK II

PROP. 42" RCP FL. = 1321.00

SDC #31
6.35' X 3.00' CONC. INLET
TOP= 1325.62
FL= 1321.74 15" RCP (S)
FL= 1321.71 15" RCP (E)
FL= 1321.69 15" RCP (NW)

SDC #30
11.30' X 3.00' CONC. INLET
TOP= 1325.88
FL= 1322.63 15" RCP (W)

SDC #39
6.35' X 3.00' CONC. INLET
TOP= 1325.18
FL= 1322.13 12" PVC (SSE)
FL= 1321.93 15" RCP (N)

SDC #29
11.30' X 3.00' CONC. INLET
TOP= 1325.90
FL= 1322.80 18" RCP (W)

SDA #38
1.80' X 1.80' GRATE INLET
TOP= 1323.99
FL= 1322.34 12" PVC(NNW)

2" STEEL GAS LINE (KANSAS GAS SERVICE)
2-PROP FIBER OPTIC (KDOT)
PROP. 42" RCP
LIMITS OF PROP. PVMT. (BY OTHERS)
37TH STREET NORTH
UNKNOWN CABLES E-W, TOP ELEV.= 1321.52
12" AC WATERLINE, TOP ELEV.= 1321.19
12" AC WATERLINE, TOP ELEV.= 1320.90
PROP. 42" RCP FL. = 1320.76
CENTURY LINK& KDOT CABLES N-S, TOP ELEV.= 1320.69
BURIED FIBER OPTIC LINE (COX)
OVERHEAD ELECTRIC (EVERGY)
BURIED FIBER OPTIC LINE (AT&T)
BURIED ELECTRIC (EVERGY)
8" PVC SS LINE
SSM #2
PRECAST CONCRETE MANHOLE
TOP= 1325.47
FL= 1318.62 6" PVC (S)
FL= 1318.06 8" PVC (W)
PROP. UNDG. ELECTRIC (KDOT)
GATE
CENTRAL CHRISTIAN CHURCH-
HIS HELPING HANDS INC.
LOTS 1, 2 & RESERVE "A"
HIS HELPING HANDS
INTERSTATE-135 (SOUTH BOUND)
INTERSTATE-135 (NORTH BOUND)
CONC.

* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 8" PVC PIPE TO VERIFY ITS HORIZONTAL AND VERTICAL LOCATION. THE PIPE LOCATION SHALL BE REPORTED TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

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

CITY OF WICHITA

TREVOR KAUFMAN LICENSED 26008 09/14/2022 KANSAS PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS

TO SERVE

NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

SANITARY SEWER ADJUSTMENT NO. 1

CU101

SAVED 9/14/2022 12:14:17 PM BY KURTIS.DEKAT
PLOTTED 9/14/2022 12:15:50 PM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNIDRAWINGS\210253-000-CU101.DWG

LEGEND

X = DENOTES SANITARY SEWER LINE TO BE ABANDONED IN PLACE.

= SANITARY SEWER MANHOLE TO BE ABANDONED

[= DENOTES CAP/PLUG BY THE CONTRACTOR. (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)

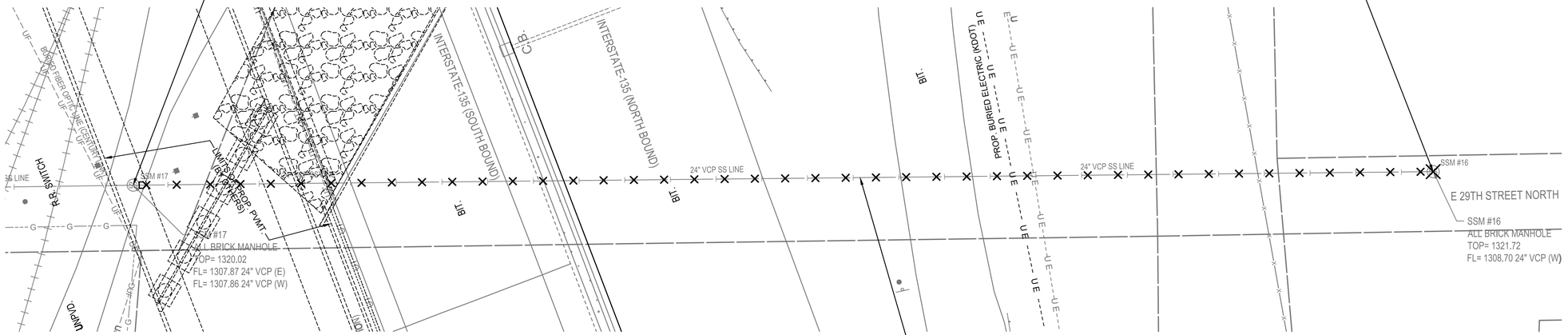
PLAN: LAT. & LONG. 0 10' 20' 40'

PROFILE: HORIZ. SAME AS ABOVE

VERT:

N: 1,704,628.7480, E: 1,654,184.1840
EXISTING MH SSM-17
PLUG EXISTING 24" VCP (E)

N: 1,704,633.2240, E: 1,654,613.8170
EXISTING MH SSM-16
ABANDON IN PLACE PER CITY OF WICHITA SPECIFICATIONS



SAND FILL 429.65 L.F. OF EXISTING 24" SANITARY SEWER

SANITARY SEWER ADJUSTMENT NO. 4

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

CITY OF WICHITA

TREVOR KAUFMAN LICENSED 26008 09/14/2022 KANSAS PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS

TO SERVE

NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

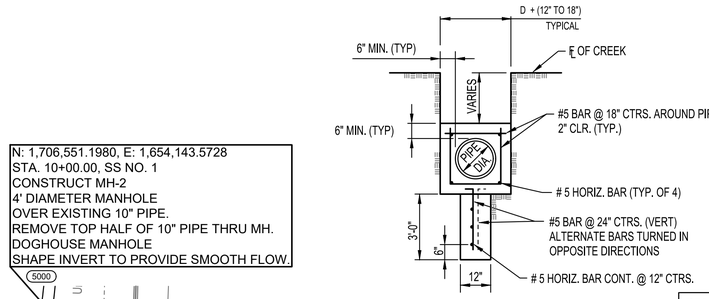
Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

SANITARY SEWER ADJUSTMENT NO. 4

CU102

SAVED 4/8/2022 2:29:34 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:23:00 AM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNI\DRAWINGS\210253-000-CU102.DWG



CONCRETE ENCASEMENT W/CUT-OFF WALL DETAIL

* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 8" VCP PIPE AT SANITARY SEWER STATION 10+00.00 AND 14+31.94 TO VERIFY ITS HORIZONTAL AND VERTICAL LOCATION. THE PIPE LOCATION SHALL BE REPORTED TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

LEGEND

- X = DENOTES SANITARY SEWER LINE TO BE ABANDONED IN PLACE.
- ⊏ = DENOTES CAP/PLUG BY THE CONTRACTOR. (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)
- (5000) = SEE SHEET NO. CU100 FOR SANITARY SEWER LINE COORDINATES (TYP.)
- = PROPOSED SILT FENCE

PLAN: LAT. & LONG. 0 10' 20' 40'
PROFILE: HORIZ. SAME AS ABOVE
VERT:

N: 1,706,551.1980, E: 1,654,143.5728
STA. 10+00.00, SS NO. 1
CONSTRUCT MH-2
4' DIAMETER MANHOLE
OVER EXISTING 10" PIPE.
REMOVE TOP HALF OF 10" PIPE THRU MH.
DOGHOUSE MANHOLE
SHAPE INVERT TO PROVIDE SMOOTH FLOW.

N: 1,706,553.0636, E: 1,654,406.2960
STA. 12+62.73, SS NO. 1
CONSTRUCT MH-3
4' DIAMETER MANHOLE

N: 1,706,554.2651, E: 1,654,575.5014
STA. 14+31.94, SS NO. 1 *
CONSTRUCT MH-4
4' DIAMETER MANHOLE
OVER EXISTING 8" PIPE.
REMOVE TOP HALF OF 8" PIPE THRU MH.
DOGHOUSE MH
SHAPE INVERT TO PROVIDE SMOOTH FLOW.
PLUG EXISTING 8" PIPE NORTH.

REMOVE AND REPLACE 47 S.Y. CONCRETE PAVEMENT IN KIND.

REMOVE AND RESET FENCE AS REQUIRED.

REMOVE AND REPLACE 317 S.Y. GRAVEL DRIVE IN KIND.

CAUTION !!! 2" GAS LINE (KGS)

CAUTION !!! BURIED TELEPHONE (AT&T)

CAUTION !!! BURIED CATV (COX COMMUNICATIONS)

CAUTION !!! 12" WATERLINE (CITY OF WICHITA)

CAUTION !!! PROP. 8" WATERLINE

PROPOSED 20' UTILITY EASEMENT BY SEP. INSTRUMENT

10.00'

10+00 11+00 12+00 13+00 14+00 14+32

UNPVD.

CONC.

10" PVC SS LINE

8" VCP SS LINE

DRAINAGE DITCH

PROPERTY LINE

SSM #10

SSM #10
ALL BRICK MANHOLE
TOP= 1320.97
FL= 1313.17 4" VCP (S)
FL= 1312.73 10" PVC (N)

BURIED ELECTRIC (KOOT)

CL HYDRAULIC
47+00

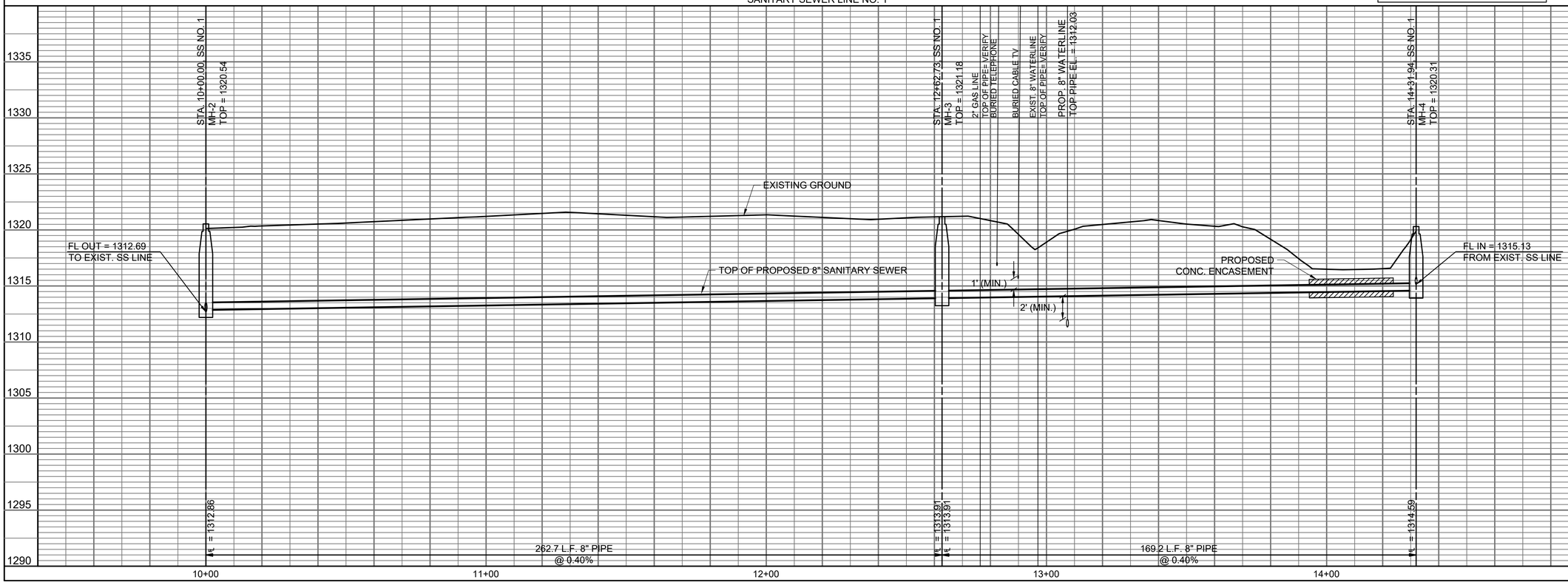
INSTALL 262.7 L.F. 8" PIPE

REMOVE AND REPLACE 87 S.Y. ASPHALT PAVEMENT

INSTALL 169.2 L.F. 8" PIPE

STA. 13+94 TO STA. 14+24 CONST. 30 L.F. REINFORCED CONCRETE ENCASEMENT WITH CUTOFF WALL SEE DETAIL, THIS SHEET.

SANITARY SEWER LINE NO. 1



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

CITY OF WICHITA

TREVOR KAUFMAN LICENSED 26008 09/14/2022 KANSAS PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

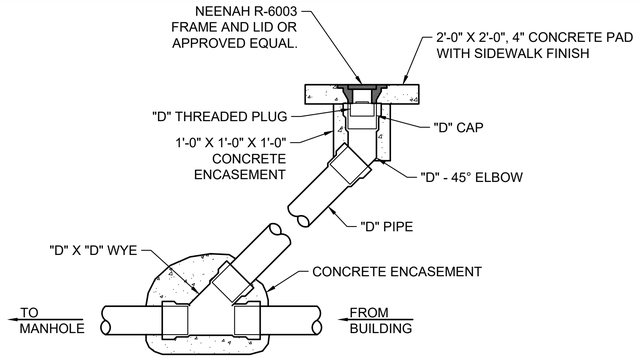
Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

SANITARY SEWER LINE NO. 1

CU103

SAVED 9/14/2022 9:44:59 AM BY KURTIS.DEKAT
PLOTTED 9/14/2022 9:51:44 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253000\MUNI\DRAWINGS\210253-000-CU103.DWG



NOTE: "D" = DIAMETER OF PIPE PER PLANS

CLEANOUT DETAIL

NOT TO SCALE

SANITARY SEWER SERVICE LINE NO. 1				
COORDINATE LIST				
POINT	NORTHING	EASTING	STATION	DESCRIPTION
5005	1,709,902.2437	1,653,454.6677	10+00.00	PROP. SS MH
5006	1,709,851.8477	1,653,474.2963	10+54.08	PROP. CLEANOUT
5007	1,709,846.1534	1,653,474.3564	10+59.78	SERVICE CONNECTION
5008	1,709,790.6566	1,653,474.9419	11+15.28	SERVICE CONNECTION
5009	1,709,696.9195	1,653,475.9309	12+09.02	SERVICE CONNECTION
5010	1,709,654.5283	1,653,476.3782	12+51.41	SERVICE CONNECTION

(5000) = COORDINATE POINT NO.

LEGEND

- X = DENOTES SANITARY SEWER LINE TO BE ABANDONED IN PLACE.
- = SANITARY SEWER MANHOLE TO BE ABANDONED
- [= DENOTES CAP/PLUG BY THE CONTRACTOR. (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)
- (5000) = SEE THIS SHEET FOR SANITARY SEWER SERVICE LINE 1 COORDINATES
- = PROPOSED SILT FENCE
- = PROPOSED INLET PROTECTION

PLAN: LAT. & LONG. 0 10' 20' 40'
PROFILE: HORIZ. SAME AS ABOVE
VERT: 0 5'

PROPOSED WATER VALVE
SEE SHEET NO. CU303

N: 1,709,902.2437, E: 1,653,454.6677
STA. 10+00.00, SS SERVICE LINE 1
MH 1
FL= 1318.03 6" PVC (S)
(5005)

SANITARY SEWER ADJUSTMENT NO. 1
SEE SHEET NO. CU101

WATERLINE NO. 1
SEE SHEET NO. CU300

REMOVE AND RESET
FENCE AS REQUIRED.

SERVICE ABANDONMENT BY OTHERS
COORDINATE WITH PROPERTY OWNER TO
PREVENT LOSS OF SERVICE.

N: 1,709,851.8477, E: 1,653,474.2963
STA. 10+54.08, SS SERVICE LINE 1
CONSTRUCT CO-1-1
6" CLEANOUT
FL= 1318.57 6" PVC
(5006)

CAUTION !!!
EXISTING WATER
SERVICE LINE

N: 1,709,846.1534, E: 1,653,474.3564
STA. 10+59.78, SS SERVICE LINE 1
CONNECT TO EXISTING SANITARY
SEWER SERVICE LINE. THE CONTRACTOR SHALL
EXCAVATE THE EXISTING SANITARY SERVICE
TO VERIFY PIPE SIZE, TYPE, FITTINGS, AND
HORIZONTAL AND VERTICAL LOCATION.
ANY ADDITIONAL LABOR OR MATERIALS
NECESSARY TO COMPLETE THE
CONNECTION SHALL BE CONSIDERED
SUBSIDIARY TO THE PROJECT.
COORDINATE CONNECTION WITH OWNER.
CONSTRUCT CO-1-2
6" CLEANOUT
FL= 1318.63 6" PVC
(5007)

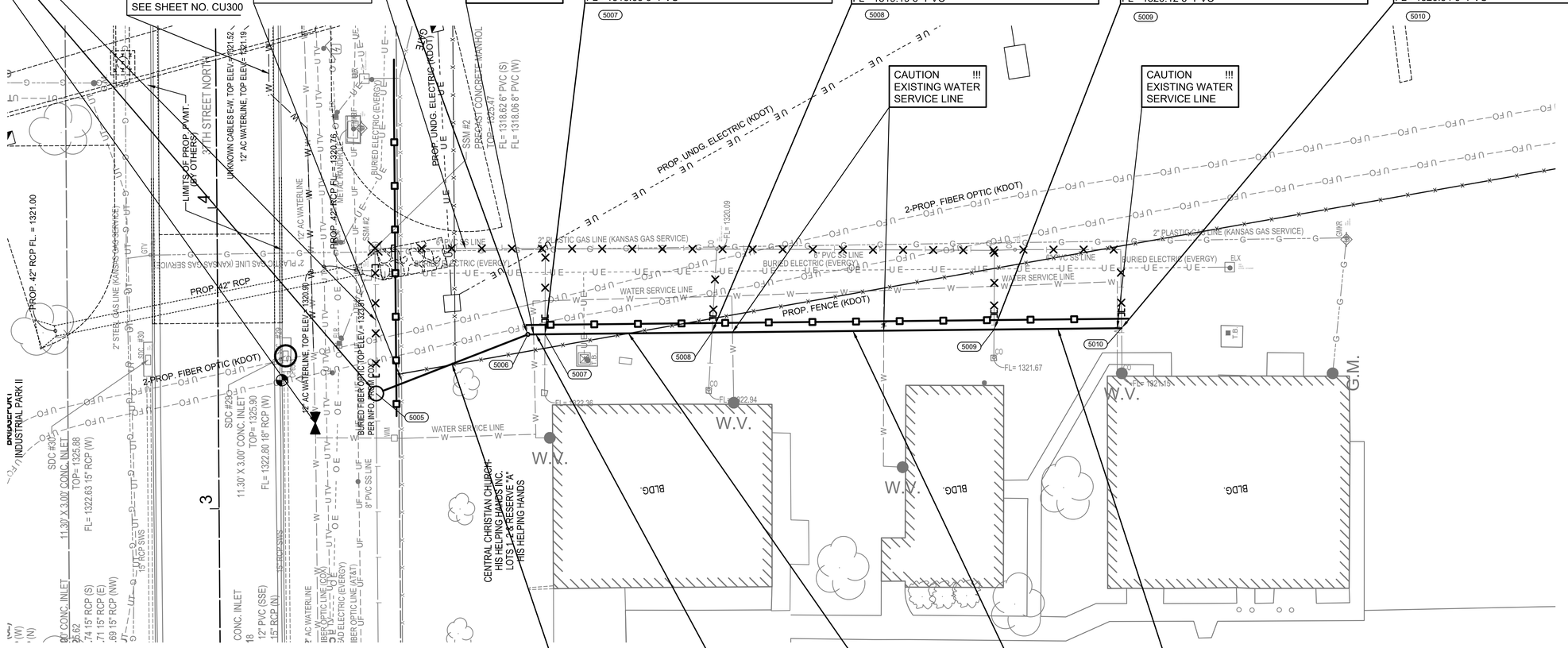
N: 1,709,790.6566, E: 1,653,474.9419
STA. 11+15.28, SS SERVICE LINE 1
CONNECT TO EXISTING SANITARY
SEWER SERVICE LINE. THE CONTRACTOR SHALL
EXCAVATE THE EXISTING SANITARY SERVICE
TO VERIFY PIPE SIZE, TYPE, FITTINGS, AND
HORIZONTAL AND VERTICAL LOCATION.
ANY ADDITIONAL LABOR OR MATERIALS
NECESSARY TO COMPLETE THE
CONNECTION SHALL BE CONSIDERED
SUBSIDIARY TO THE PROJECT.
COORDINATE CONNECTION WITH OWNER.
CONSTRUCT CO-1-3
6" CLEANOUT
FL= 1319.19 6" PVC
(5008)

CAUTION !!!
EXISTING WATER
SERVICE LINE

N: 1,709,696.9195, E: 1,653,475.9309
STA. 12+09.02, SS SERVICE LINE 1
CONNECT TO EXISTING SANITARY
SEWER SERVICE LINE. THE CONTRACTOR SHALL
EXCAVATE THE EXISTING SANITARY SERVICE
TO VERIFY PIPE SIZE, TYPE, FITTINGS, AND
HORIZONTAL AND VERTICAL LOCATION.
ANY ADDITIONAL LABOR OR MATERIALS
NECESSARY TO COMPLETE THE
CONNECTION SHALL BE CONSIDERED
SUBSIDIARY TO THE PROJECT.
COORDINATE CONNECTION WITH OWNER.
CONSTRUCT CO-1-4
6" CLEANOUT
FL= 1320.12 6" PVC
(5009)

CAUTION !!!
EXISTING WATER
SERVICE LINE

N: 1,709,654.5283, E: 1,653,476.3782
STA. 12+51.41, SS SERVICE LINE 1
CONNECT TO EXISTING SANITARY
SEWER SERVICE LINE. THE CONTRACTOR SHALL
EXCAVATE THE EXISTING SANITARY SERVICE
TO VERIFY PIPE SIZE, TYPE, FITTINGS, AND
HORIZONTAL AND VERTICAL LOCATION.
ANY ADDITIONAL LABOR OR MATERIALS
NECESSARY TO COMPLETE THE
CONNECTION SHALL BE CONSIDERED
SUBSIDIARY TO THE PROJECT.
COORDINATE CONNECTION WITH OWNER.
CONSTRUCT CO-1-5
6" CLEANOUT
FL= 1320.54 6" PVC
(5010)



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

CITY OF WICHITA

TREVOR KAUFMAN
LICENSED
26008
09/14/2022
KANSAS
PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS

TO SERVE

NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

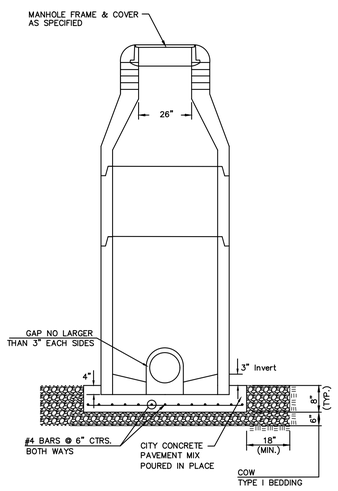
Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

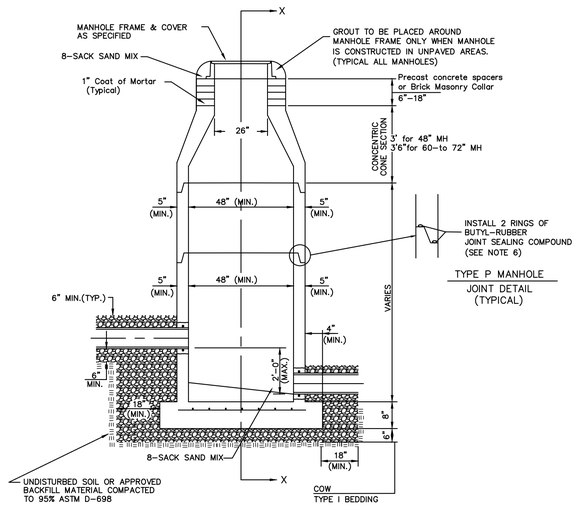
SANITARY SEWER SERVICE LINE NO. 1

CU104

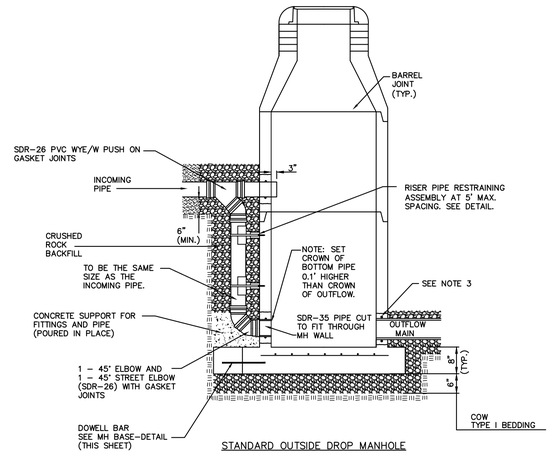
SAVED 9/14/2022 9:45:02 AM BY KURTIS.DEKAT
PLOTTED 9/14/2022 9:51:57 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNIDRAWINGS\210253-000-CU104.DWG



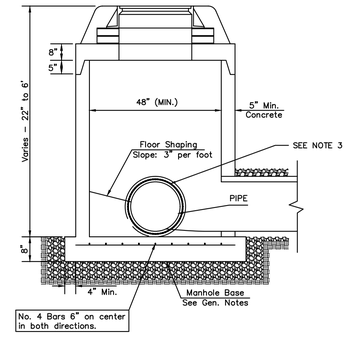
DOG HOUSE MANHOLE
(OVER EXISTING PIPE)
Not to Scale



STANDARD MANHOLE
Not to Scale



STANDARD OUTSIDE DROP MANHOLE
Not to Scale

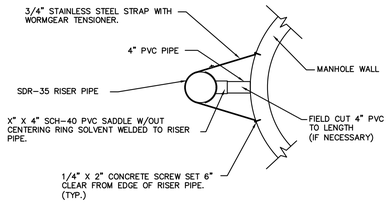


SHALLOW MANHOLE
Not to Scale

= COW TYPE I BEDDING = UNDISTURBED SOIL

PRECAST MANHOLE GENERAL NOTES

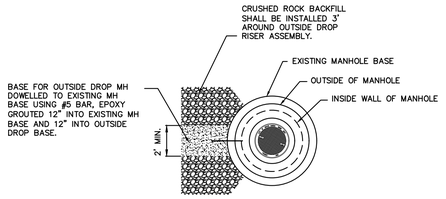
1. ALL PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO THE LATEST REVISIONS OF A.S.T.M. C478 AS MODIFIED BY THE SPECIFICATIONS.
2. NON-SHRINK GROUT SHALL BE NON-METALLIC TYPE.
3. APPROVED FLEXIBLE WATERSTOP SHALL BE INSTALLED TO JOIN THE SEWER PIPE TO THE MANHOLE WALL. THE SEWER PIPE SHALL BE SUPPORTED WITH CRUSHED ROCK A MINIMUM OF 3 FEET FROM THE MANHOLE WALL AND TO THE FIRST JOINT FOR V.C.P. SUCH THAT THE JOINT REMAINS FLEXIBLE.
4. ALL INSIDE SURFACES OF THE CONCRETE MANHOLE WHICH WOULD BE EXPOSED TO SEWER GAS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
5. EXTERIOR MANHOLE WALLS SHALL BE COATED PER SECTION 804.4 OF STANDARD SPECIFICATIONS.
6. JOINT SEALING COMPOUND SHALL BE PER 804.4 OF STANDARD SPECIFICATIONS.
7. ALL MANHOLE SECTION JOINTS THAT WILL BE IN GROUNDWATER OR GREATER THAN 12' DEEP SHALL BE WRAPPED WITH AN EXTERNAL JOINT SEAL PER SECTION 804.4 OF STANDARD SPECIFICATIONS. AS INDICATED BY THE PLANS.
8. PRECAST MANHOLES SHALL BE SET AT LEAST 4 INCHES INTO THE MANHOLE BASE FOR DOG HOUSE MANHOLES.
9. TOP OF MANHOLE FLOOR SLAB SHALL BE AT LEAST 3 INCHES BELOW THE FLOW LINE OF THE OUTLET PIPE TO INSURE SUFFICIENT MINIMUM THICKNESS OF SHAPED INVERT.
10. LIFTING HOLES SHALL BE FILLED WITH NON-SHRINK GROUT AND THE INTERIOR SURFACE COATED AS SPECIFIED.
11. MORTAR USED IN MASONRY CONSTRUCTION SHALL CONTAIN 8 SACKS OF CEMENT PER CUBIC YARD. CONCRETE USED IN MANHOLE BASES SHALL CONFORM TO THE REQUIREMENTS OF CONCRETE FOR CONCRETE PAVEMENT CONSTRUCTION AS SPECIFIED IN THE CITY STANDARD PAVING SPECIFICATIONS USING CITY CONCRETE PAVEMENT MIX WITHOUT AIR ENTRAINING ADMIXTURE. MORTAR SHALL BE PLACE AROUND THE MANHOLE RING AS SHOWN ON THE DRAWINGS WHEN MANHOLES ARE CONSTRUCTED IN UNPAVED AREAS. COMPLETED MANHOLE SHALL BE WITHOUT LEAKS AND WATER TIGHT.
12. REINFORCING STEEL SHALL BE INSTALLED IN THE MANHOLE BASES AND SHALL CONSIST OF NO.4 BARS PLACED ON 6" CENTERS IN BOTH DIRECTIONS. THE MANHOLE BASE REINFORCEMENT SHALL BE PLACED AT LEAST 3" ABOVE THE BOTTOM OF THE MANHOLE BASE. ALL COSTS FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
13. WALL THICKNESS SHALL BE 1" GREATER THAN MANHOLE DIAMETER IN FEET.
14. OPENINGS SHALL BE CORE DRILLED INTO THE MANHOLE WALL WHEN OUTSIDE DROPS ARE CONSTRUCTED ON EXISTING MANHOLES. SUCH OPENINGS DRILLED INTO EXISTING MANHOLES SHALL BE AS SMALL AS PRACTICAL TO FACILITATE INSTALLING AND GROUTING THE NEW PIPE IN PLACE. WATERSTOP GASKETS SHALL BE USED WITH P.V.C. PIPE. THE NEW PIPE SHALL BE GROUTED INTO THE OPENING USING AN APPROVED NONSHRINK GROUT FOR THE FULL MANHOLE WALL THICKNESS. THE EXTERIOR OF THE COMPLETED CONNECTION SHALL BE SEALED WITH AN APPROVED BITUMINOUS COATING SUCH THAT THE CONNECTION WILL BE WATER TIGHT. FLOOR OF MANHOLE SHALL BE MODIFIED TO FORM NEW FLOW CHANNEL FOR THE NEW CONNECTION AS INDICATED BY THE DRAWING. THIS WORK, INCLUDING MODIFICATION OF MANHOLE FLOOR, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR OUTSIDE DROP STACK CONSTRUCTED ON EXISTING MANHOLE.
15. THE FLOORS OF ALL MANHOLES SHALL BE SHAPED WITH FLOW CHANNELS SUCH THAT THE MANHOLES WILL BE SELF CLEANING AND FREE OF AREAS WHERE SOLIDS COULD BE DEPOSITED AS SEWAGE FLOWS THROUGH THE MANHOLE FROM ALL INLET PIPES TO THE OUTLET PIPE. FLOW CHANNELS SHALL BE FORMED TO MATCH THE BOTTOM HALVES OF THE INFLOWING PIPES AND THE OUTFLOWING PIPE AS SHOWN BY THE DRAWINGS. MANHOLE FLOORS SHALL HAVE SLOPES OF 3 INCHES PER FOOT IN THE AREAS OUTSIDE OF THE FLOW CHANNELS SLOPED TOWARD THE FLOW CHANNELS. PIPES LAID THROUGH MANHOLES SHALL HAVE THE TOP HALF REMOVED TO NEAT LINES FOR THE FULL INSIDE DIAMETER OF THE MANHOLE. MANHOLE FLOORS SHALL THEN BE SHAPED AROUND THE BOTTOM HALF OF THE PIPE WHICH FORMS THE FLOW CHANNEL.
16. MANHOLE COVER CASTINGS AND MANHOLE FRAME CASTINGS SHALL CONFORM TO THE REQUIREMENTS AS INDICATED IN THE STANDARD SPECIFICATIONS AND AS SHOWN IN THE STANDARD DETAIL DRAWING.
17. THE VERTICAL DROP IN STANDARD MANHOLES SHALL NOT EXCEED 2' REGARDLESS OF PIPE SIZE. THE CROWNS OF INFLOWING PIPES SHALL NEVER BE SET LOWER THAN THE CROWN OF THE OUTFLOWING PIPE.
18. STANDARD MANHOLES SHALL BE BID AS STANDARD MANHOLES FOR THE TYPE AND DIAMETER INDICATED. OUTSIDE DROP MANHOLES SHALL BE BID AS STANDARD OUTSIDE DROP MANHOLES FOR THE TYPE AND DIAMETER INDICATED. ALL MANHOLE DIAMETERS WILL BE 4' UNLESS INDICATED OTHERWISE.
19. PRECAST CONCRETE SPACERS OR BRICK MASONRY COLLAR SHALL BE INSTALLED BETWEEN THE CAST IRON FRAME AND THE CONCENTRIC CONE. THE COLLAR WILL HAVE 8" WALLS AND A VERTICAL HEIGHT OF 6" MINIMUM AND 18" MAXIMUM. A 1" COAT OF MORTAR WILL BE PLASTERED ON THE OUTSIDE OF THE COLLAR. THE USE OF PRE-CAST CONCRETE SPACERS FOR MANHOLE TOP ADJUSTMENT IS ALSO ALLOWED.
20. THE FULL DIAMETER OF THE MANHOLE SHALL EXTEND THE ENTIRE DEPTH OF THE MANHOLE TO THE CONE SECTION. NO REDUCTION IN MANHOLE DIAMETER WILL BE ALLOWED.



RISER PIPE RESTRAINING ASSEMBLY
Not to Scale

SANITARY SEWER MANHOLE DIAMETERS

DIAMETER	DEPTH	PIPE SIZE
4'	0'-15'	8"-18"
5'	>15'-30'	21"-30"
6'	>30'	36"-60"



MH BASE DETAIL
Not to Scale

REVISION NOVEMBER 2019	RISER PIPE RETAINING ASSEMBLY REVISED ON MANHOLE DRAWING

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

PRECAST SANITARY SEWER MANHOLE

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
___-_____	_____	

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

SHEET
_ of _

SS-101

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

CITY OF WICHITA

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

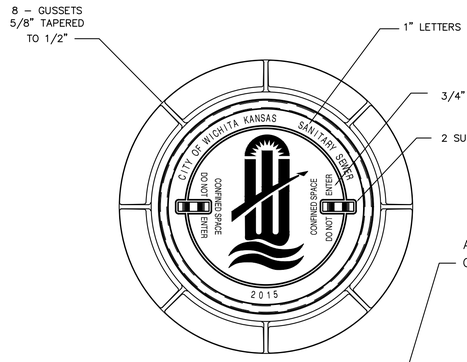
ISSUE:		

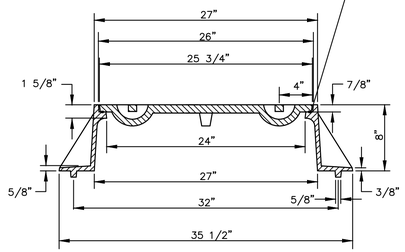
JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

PRECAST SANITARY SEWER MANHOLE

CU200

SAVED 3/3/2022 1:31:32 PM BY KONNER.WELLS
PLOTTED 9/13/2022 11:23:39 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253000\MUN\DRAWINGS\210253-000-CU200.DWG

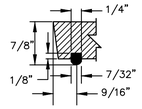




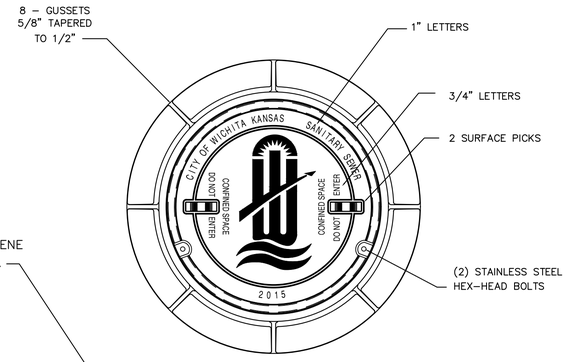
STANDARD MANHOLE FRAME & COVER

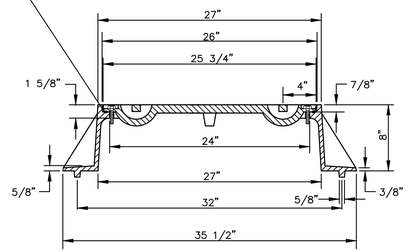
DEETER #1261 OR EJIW #1936–Z1

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.



O–RING DETAIL





BOLT DOWN MANHOLE FRAME & COVER

DEETER #1261 OR EJIW #1936–Z1

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

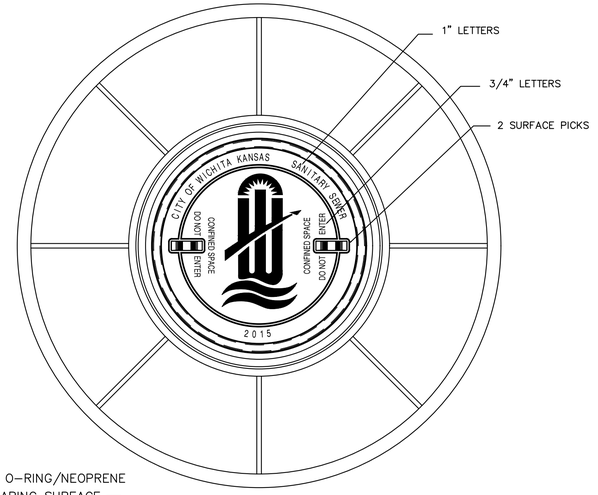
GENERAL NOTES

1. MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A–48. DIMENSIONS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.

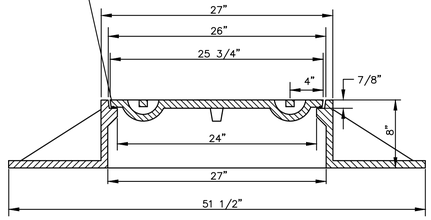
2. MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDARY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON–ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.

3. THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUM–FERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.

4. THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1"IIN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SANITARY SEWER".
THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN WITH CITY OF WICHITA DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH BLOCKOUTS AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.



ALL LIDS TO BE FURNISHED WITH O–RING/NEOPRENE GASKET GLUED IN THE COVER BEARING SURFACE.



WIDE FLANGED FRAME & COVER

DEETER #1261A

NOTE:
1. FURNISHED WITH MACHINED HORIZONTAL BEARING SURFACE.

REVISED: MARCH 2016

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

MANHOLE FRAME AND COVER (SANITARY SEWER)

CITY ENGINEER
GARY JANZEN, P.E

PROJECT NUMBER	OCA NUMBER	DATE
___-_____	_____	

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

SHEET
_ of _

SS-I02

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

CITY OF WICHITA

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

MANHOLE FRAME AND COVER DETAILS

CU201

SAVED 5/2/2022 1:26:24 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:23:44 AM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNIDRAWINGS\210253-000-CU201.DWG

GENERAL NOTES

1. APPLICATION. Risers shall be installed to serve all lots or tracts where the sanitary sewer main is below the water table, where the sanitary sewer main depth is greater than 12' below the proposed ground elevation, where the main is adjacent to a pond or wherever service lines would have to cross under storm sewer pipe. Installation of risers because of field conditions shall be as approved by the City Engineer. The location of the risers to serve developed property shall be approved by the property owner and the Construction Engineer.

2. MANHOLE STUB RISERS. Manhole stub risers be installed in manholes where locations of manholes will provide satisfactory service connection as determined by the Construction Engineer. The vertical distance between the flowline of the manhole stub and the flowline of the sanitary sewer line out of the manhole shall not exceed 2'. Risers shall be utilized at manholes as indicated in Note 1. Manhole stub riser shall be set such that the top of the stub is not lower than the top of the sanitary sewer line.

3. SIZING. Risers shall be sized according to the plans and riser table where risers are indicated by the plans. Where risers are required because of field conditions, the risers shall be 6" diameter for commercial or industrial properties and 4" or 6" diameter for residential properties, based on lot size and sanitary sewer main depth. Sizing of risers shall be approved by the construction Engineer prior to installation.

4. RISER MATERIAL. Risers shall be constructed of Schedule 40 PVC Pipe, meeting the requirement of the latest revision of A.S.T.M.. All pipe joints shall be solvent welded. Full body tee shall be SDR 26 PVC pipe.

5. ROCK ENCASEMENT. Riser connection to clay pipe sanitary sewers shall be rock encased both ways from the riser centerline. The rock encasement shall extend three feet from the riser centerline or stop at the first sanitary sewer pipe joint within three feet of the riser centerline. Riser connections to PVC Sanitary sewer mains shall be rock encased one foot each way from the riser centerline. Crushed rock shall conform to ASTM C-33, Gradation No. 67, and shall meet all requirements for Portland Cement Concrete pavement Coarse Aggregate, Section 406.2, City of Wichita Standard Specifications.

6. BEDDING. Beyond the limits of the rock encasement, bedding around the sanitary sewer riser shall be compacted Pipe Bedding Type 1 or 2. The bedding shall be placed and compacted from the depth of the sanitary sewer main to the top of the sanitary sewer riser pipe. Compacted Pipe Bedding Type 1 or 2 shall be required for all risers whether constructed in vertical wall or sloped wall trenches. Bedding material and construction practices shall be approved by the Construction Engineer prior to installation.

7. SUPPORT OF RISERS. Sanitary sewer riser pipe shall be supported during trench backfill. The riser pipe shall be held in a vertical position at all times until trench backfill and compaction has been completed. Contractor's methods for supporting and back filling the riser pie shall be approved by the Construction Engineer.

8. PLUGGING. The ends of the riser pipes and manhole stubs shall be plugged using an airtight solvent welded cap or plug. Cap or plug fittings shall be approved by the Construction Engineer prior to installation. Caps or plugs which do not provide an airtight seal will not be accepted.

9. TOP OF THE RISER PIPE. The top elevation of the sanitary sewer riser pipe shall be built per plan elevations, unless otherwise directed by the Construction Engineer. where riser elevations are not shown on the plans, the top of the risers shall be set at an elevation four feet below t he proposed ground surface. If ground water is encountered, the top of the riser pipe shall be set at an elevation 2' (min.) above the maximum water table elevation, regardless of the riser elevation shown on the plans.

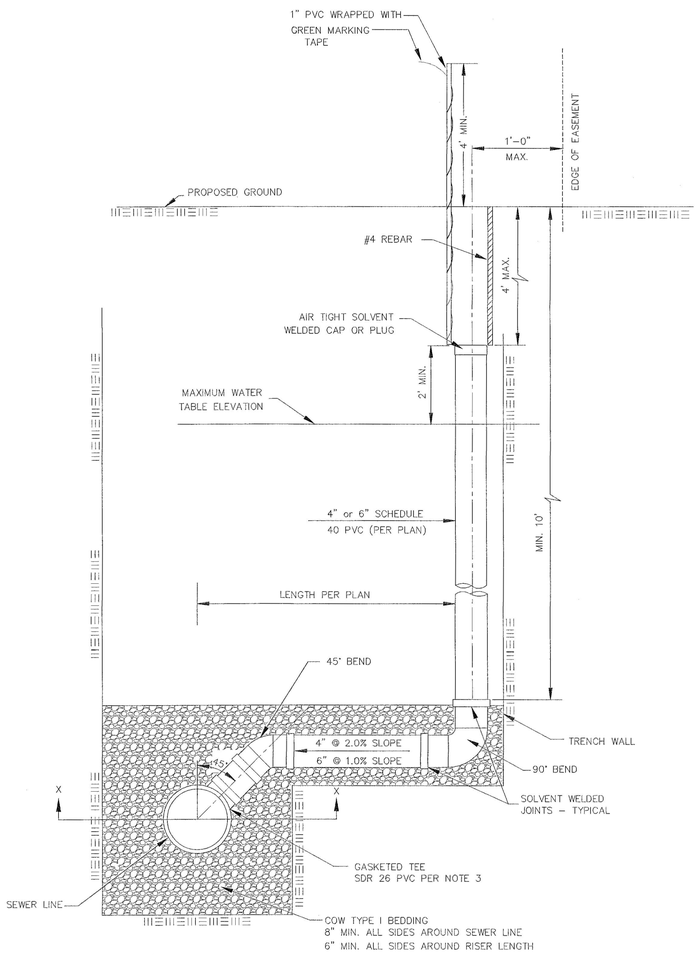
10. MARKING. Locations of the ends of the sanitary sewer riser pipe shall be marked by installing 1" PVC from the top of the riser to a minimum of 4' above the top of finished grade. No. 4 rebar shall be placed centered over the riser from the cap to the existing ground. The 1" PVC pipe shall be wrapped with green colored plastic tape, for the full length above ground surface. The green tape shall be 4 mil Polyethylene film with a minimum width of three inches, specifically manufactured for the purpose of identification of underground sewers.

11. LOCATION MEASURES. The project inspector shall record and document the location of all risers constructed as measured from the nearest manhole, indicate the direction from the manhole, the direction and distance from the main, riser size, and elevation of the top of the riser in tabular format.

12. RISER LOCATION. the riser shall be located per plan if shown. If not shown on the plan, the riser shall be located at the center of the lot, within one foot of the property side of the easement for the lot being served. All riser locations shall be approved by the Construction Engineer prior to installation.

13. PAYMENT. "Riser Assembly, Vertical " shall be paid for at the contract unit price per each, which shall be full compensation for all pipe, fittings, marking tape, length of backfill, labor, site restoration, and any other items necessary to complete the work.

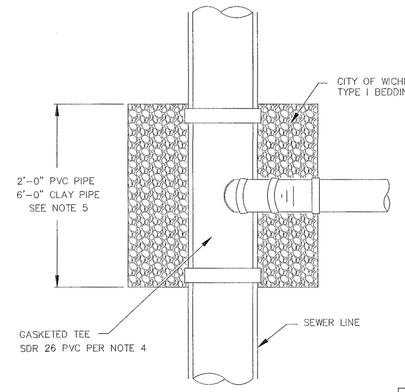
"Riser Assembly, Manhole Stub" shall be paid for at the contract unit price per each, which shall be full compensation for all labor material and incidentals necessary to complete the work including all pipe, fittings, rock encasement, and all other items as required and listed for "Riser Assembly, Vertical "



NOTE: RISER PIPE REQUIREMENTS AT MANHOLE CONNECTION SHALL BE SIMILAR TO THOSE SHOWN ABOVE.

SANITARY SEWER RISER TABLE							FOR INFORMATION ONLY	
		LOCATION					APPROXIMATE LENGTH	
NUMBER	TYPE	LOT NO.	BLOCK NO.	LINE NO.	STATION	DIRECTION	VERTICAL (FT)	HORIZONTAL (FT)
1	4" MANHOLE CONNECTION							
2	6" MANHOLE CONNECTION							
3	4" TEE							
4	6" TEE							

NOTE: TABLE FOR REFERENCE ONLY AND SHOULD BE ON EACH APPLICABLE PLAN SHEET.



NOTE:
NON SHEAR COUPLING TO BE USED WHEN HOOKING TO CLAY PIPE.

TYPICAL SECTION X-X

GARY L. JANZEN LICENSED PROFESSIONAL KANSAS ENGINEER
07/21/15

REVISED: JULY 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

VERTICAL RISER ASSEMBLY SEWER DETAIL

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE
___-_____	_____	

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

SHEET
_ of _

SS-103

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

CITY OF WICHITA

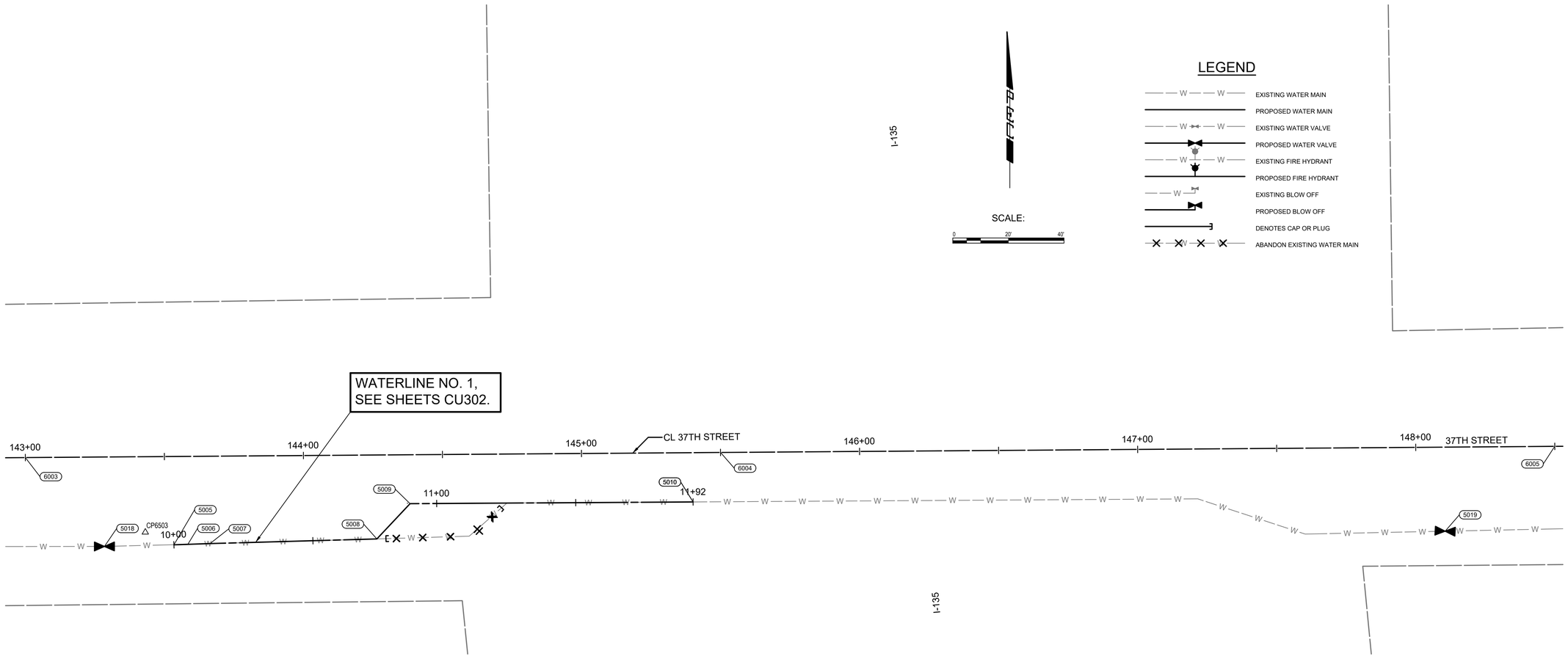
SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

VERTICAL RISER ASSEMBLY SEWER DETAIL

CU-202



WATERLINE NO. 1				
COORDINATE LIST				
POINT	NORTHING	EASTING	STATION	DESCRIPTION
5005	1,709,923.0696	1,653,469.8070	10+00.00	EXIST. WL
5006	1,709,923.2382	1,653,474.8042	10+05.08	11 1/4° VERT. BEND
5007	1,709,923.5081	1,653,482.8016	10+13.00	11 1/4° VERT. BEND
5008	1,709,925.1740	1,653,542.7845	10+73.01	45° BEND
5009	1,709,937.8608	1,653,554.7196	10+90.43	45° BEND
5010	1,709,938.4817	1,653,656.4937	11+92.20	EXIST. WL

(5000) = COORDINATE POINT NO.

PROPOSED WATER VALVES			
COORDINATE LIST			
POINT	NORTHING	EASTING	DESCRIPTION
5018	1,709,922.4856	1,653,444.8139	ANCHORED SPECIAL VALVE
5019	1,709,927.9685	1,653,926.9340	ANCHORED SPECIAL VALVE

(5000) = COORDINATE POINT NO.

CL 37TH STREET				
COORDINATE LIST				
POINT	NORTHING	EASTING	STATION	DESCRIPTION
6003	1,709,954.4424	1,653,416.3696	143+00.00	PI
6004	1,709,956.2784	1,653,666.3629	145+50.00	PI
6005	1,709,958.4816	1,653,966.3548	148+50.00	PI

(6000) = COORDINATE POINT NO.

HORIZONTAL DATUM/COORDINATE SYSTEM: ADJUSTED STATE PLANE COORDINATES NAD 83 KANSAS SOUTH ZONE
PROJECT COORDINATE SYSTEM: (GRID) ON DESCRIBED COORDINATE SYSTEM
VERTICAL DATUM: NAVD 88

BMK 6201 (NOT SHOWN)
CHISELED SQUARE ON TOP OF CURB, EAST SIDE OF THE SOUTHEAST CURB RETURN AT 3TH STREET AND OHIO
EL= 1324.59 (NAVD88)
BMK 6202 (NOT SHOWN)
CHISELED SQUARE ON THE WEST END RETURN TO MAHANEY GROUP DRIVE, NORTH SIDE OF 37TH STREET, FIRST DRIVE WEST OF BRIDGE PORT
EL= 1323.53 (NAVD88)
BMK 6206 (NOT SHOWN)
CHISELED SQUARE ON THE SOUTHEAST CORNER OF A CURB INLET, EAST SIDE OF EAST ENTRANCE TO 37TH BUSINESS CENTER
EL= 1327.39 (NAVD88)

CP-6501 (NOT SHOWN)
N: 1709921.600 E: 1652466.990
1/2" REBAR WITH PEC CONTROL POINT CAP, SOUTHEAST CORNER OF 37TH STREET AND OHIO
1. 26.2' N TO THE CENTERLINE OF 37TH STREET
2. 45.0' W TO THE CENTERLINE OF OHIO STREET
CP-6502 (NOT SHOWN)
N: 1709978.0680 E: 1653059.279
1/2" REBAR WITH PEC CONTROL POINT CAP, WEST SIDE OF DRIVE TO MAHANEY GROUP
1. 28.5' E TO THE CENTERLINE OF DRIVE
2. 26.0' SOUTH TO THE CENTERLINE OF 37TH STREET
CP-6503
N: 1709927.5830 E: 1653459.512
1/2" REBAR, E SIDE OF E ENTRANCE TO 37TH STREET BUSINESS CENTER
1. 24.0' W TO THE CENTERLINE OF DRIVE
2. 27.0' NORTH TO THE CENTER OF 37TH STREET

NOTE: WATERLINE VALVES TO BE OPERATED BY CONTRACTOR ONLY IF WATER DEPARTMENT REPRESENTATIVE IS ON SITE.

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

CITY OF WICHITA

TREVOR KAUFMAN LICENSED 26008 09/14/2022 KANSAS PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

WATER LINE NO. 1 KEY MAP, CONTROL, & BUBBLE MAP

CU300

SAVED 9/13/2022 10:43:43 AM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:24:01 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNI\DRAWINGS\210253-000-CU300.DWG

CL HYDRAULIC AVENUE				
COORDINATE LIST				
POINT	NORTHING	EASTING	STATION	DESCRIPTION
6000	1,706,020.3679	1,654,492.2696	42+00.00	PI
6001	1,706,670.2210	1,654,478.4510	48+50.00	PI
6002	1,707,320.0741	1,654,464.6325	55+00.00	PI

(6000) = COORDINATE POINT NO.

WATERLINE NO. 2				
COORDINATE LIST				
POINT	NORTHING	EASTING	STATION	DESCRIPTION
5011	1,706,096.3297	1,654,442.6884	10+00.00	BLOWOFF
5012	1,706,116.2861	1,654,444.0093	10+20.00	FIRE HYDRANT
5013	1,706,293.8890	1,654,455.7642	11+97.99	HORIZ. DEFL.
5014	1,706,313.8841	1,654,456.2063	12+17.99	HORIZ. DEFL.
5015	1,706,411.3568	1,654,454.1122	13+15.49	FIRE HYDRANT
5016	1,707,272.7307	1,654,435.5831	21+77.06	90° BEND
5017	1,707,272.7191	1,654,422.2058	21+90.44	EXIST. WL

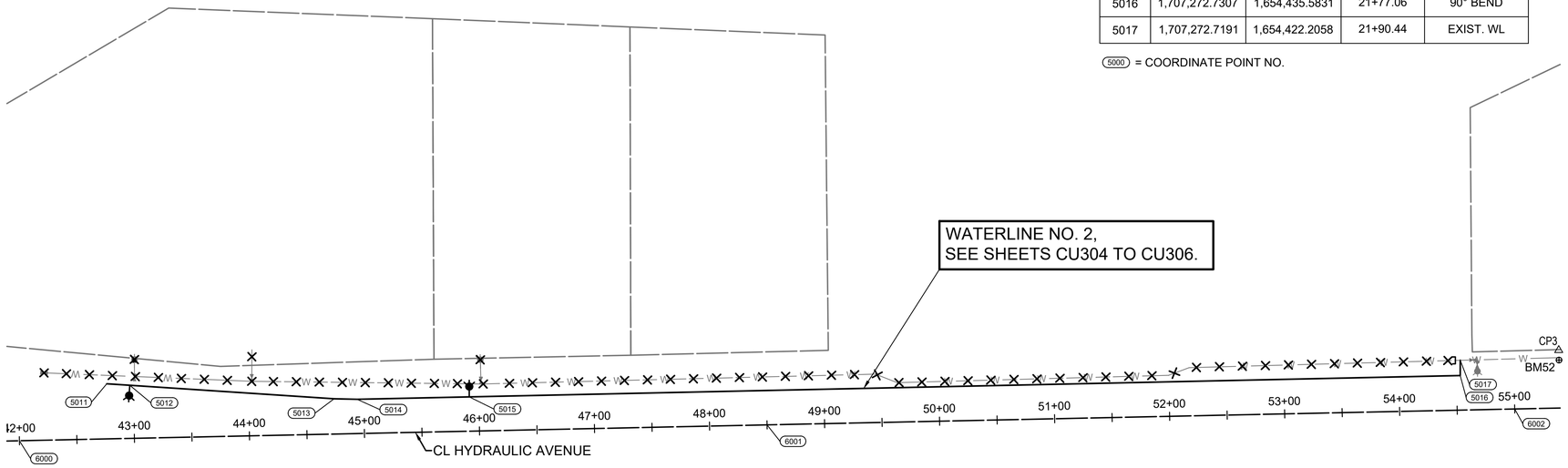
(5000) = COORDINATE POINT NO.

SCALE:

0 60' 120'

LEGEND

- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING BLOW OFF
- PROPOSED BLOW OFF
- DENOTES CAP OR PLUG
- ABANDON EXISTING WATER MAIN



NOTE: WATERLINE VALVES TO BE OPERATED BY CONTRACTOR ONLY IF WATER DEPARTMENT REPRESENTATIVE IS ON SITE.

HORIZONTAL DATUM/COORDINATE SYSTEM: ADJUSTED STATE PLANE COORDINATES NAD 83 KANSAS SOUTH ZONE

PROJECT COORDINATE SYSTEM: (GRID) ON DESCRIBED COORDINATE SYSTEM

VERTICAL DATUM: NAVD 88

BMK 52

CHISELED SQUARE ON A RETAINING WALL, NORTH END OF SOUTH ENTRANCE TO FIRST WIRELESS

EL= 1320.83 (NAVD88)

BMK 53

CHISELED SQUARE ON THE WEST END OF NORTH RETAINING WALL AT EAST BOUND K-96 RAMP AT HYDRAULIC

EL= 1319.55 (NAVD88)

BMK 54 (NOT SHOWN)

CHISELED SQUARE ON THE CENTER OF THE NORTHEAST HEADWALL OF THE ABANDONED SCALE, DIRECTLY SOUTH OF POLE #W7F84558

EL= 1325.61 (NAVD88)

CP-3

N= 1707358.366 E: 1654413.525

MAG NAIL IN THE NORTH SIDE OF THE SOUTH ENTRANCE TO FIRST WIRELESS

1. 15.0' S TO THE CENTERLINE OF THE ENTRANCE

2. 26.5' E TO THE W EDGE OF HYDRAULIC

3. 74.2' SSE TO THE TOP CENTER OF A FIRE HYDRANT

CP-4

N: 1706668.699 E: 1654538.965

1/2" REBAR WITH PEC CONTROL POINT CAP, NORTH SIDE OF EAST BOUND K-96 RAMP AT HYDRAULIC

1. 3.0' E TO A CHISELED SQUARE ON THE WEST END OF THE RETAINING WALL

2. 36.5' W TO THE EAST EDGE OF HYDRAULIC

3. 14.5' S TO THE NORTH EDGE OF K-96 ON-RAMP

CP-5 (NOT SHOWN)

N: 1707245.159 E: 1653219.950

1/2" REBAR WITH PEC CONTROL POINT CAP

1. 5.8' E TO A RAILROAD SPIKE IN THE WEST FACE OF A POWER POLE

2. 30.3' NORTH TO A KDOT RIGHT OF WAY FENCE (EAST/WEST)

3. 62.34' SSE TO A CHISELED SQUARE ON A RETAINING WALL (BM 54)

CP-6 (NOT SHOWN)

N: 1707290.5486 E: 1652531.478

CHISELED CROSS ON THE SOUTHEAST CORNER OF A STORM DRAIN MANHOLE PAD

1. 22.0' S TO THE CENTERLINE OF HAUL ROAD

2. 56.5' W TO THE CENTERLINE OF OHIO STREET

3. 64.9' WSW TO THE NORTHWEST CORNER OF CONCRETE FENCE COLUMN

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

CITY OF WICHITA

TREVOR KAUFMAN LICENSED 26008 09/14/2022 KANSAS PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS

TO SERVE

NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

WATER LINE NO. 2 KEY MAP, CONTROL, & BUBBLE MAP

CU301

SAVED 5/16/2022 11:09:55 AM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:24:11 AM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNIDRAWINGS\210253-000-CU301.DWG

N: 1709923.0696, E: 1653469.8070
WL No. 1, STA. 10+00.00=
CL 37TH STREET, STA. 143+53.21, 32' R
EXISTING 12" WATERLINE*
CONNECT NEW PIPE TO EXIST. 12" WATERLINE.
ALL FITTINGS, ADAPTORS, AND
OTHER INCIDENTALS NECESSARY TO
PERFORM THIS TIE IN SHOULD BE
CONSIDERED SUBSIDIARY TO THE PRICE BID
FOR PIPE.
BEGIN WL NO. 1
(5005)

N: 1709923.2410, E: 1653474.8867
WL No. 1, Sta. 10+05.08=
CL 37TH STREET, STA. 143+58.29, 32' R
1- 12" 11 1/4° RJ VERTICAL BEND
(5006)

N: 1709923.5081, E: 1653482.8016
WL No. 1, Sta. 10+13.00=
CL 37TH STREET, Sta. 143+66.20, 31' R
1- 12" 11 1/4° RJ VERTICAL BEND
(5007)

CAUTION !!!
PROPOSED 42" RCP
STORM WATER SEWER
(BY OTHERS)

CAUTION !!!
2" GAS LINE
(KGS)

N: 1709925.1740, E: 1653542.7845
WL No. 1, STA. 10+73.01=
CL 37TH STREET, STA. 144+26.20, 30' R
1- 12" 45° RJ BEND
DEFL.= 45°10'43"
(5008)

REMOVE AND REPLACE
113 L.F. CURB & GUTTER
IN KIND.

N: 1709937.8608, E: 1653554.7196
WL No. 1, STA. 10+90.43=
CL 37TH STREET, STA. 144+38.22, 18' R
1- 12" 45° RJ BEND
DEFL.= 46°23'57"
(5009)

REMOVE AND REPLACE
63 S.Y. CONCRETE
PAVEMENT.

CAUTION!!!
BURIED FIBER OPTIC LINE
(CENTURY LINK)

CAUTION !!!
30" RCP STORM
WATER SEWER

N: 1709938.4817, E: 1653656.4937
WL No. 1, Sta. 11+92.20=
CL 37TH STREET, Sta. 145+40.00, 18' R
EXISTING 12" WATERLINE*
CONNECT TO EXIST. 12" WATERLINE.
ALL FITTINGS, ADAPTORS, AND
OTHER INCIDENTALS NECESSARY TO
PERFORM THIS TIE IN SHOULD BE
CONSIDERED SUBSIDIARY TO THE PRICE BID
FOR PIPE.
END WL NO. 1
(5010)

PLAN: LAT. & LONG. 0 10' 20' 40'
PROFILE: HORIZ. SAME AS ABOVE
VERT:

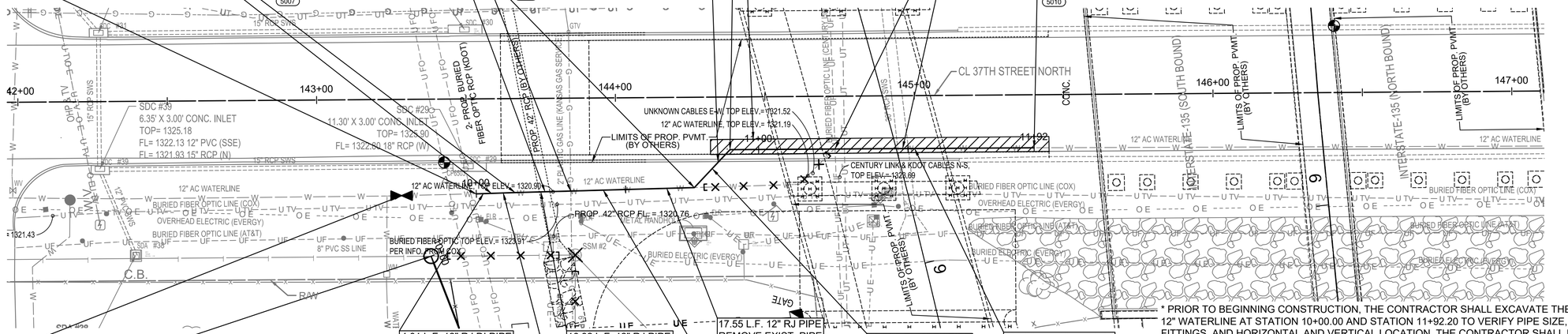
LEGEND

X = DENOTES WATERLINE TO BE ABANDONED IN PLACE.

[= DENOTES CAP/PLUG BY THE CONTRACTOR. (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)

⊛ = CLOSE VALVE, REMOVE VALVE BOX (SALVAGE TO CITY) (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)

(5000) = SEE SHEET NO. CU300 FOR WATERLINE COORDINATES (TYP.)



PROPOSED WATER VALVE
SEE SHEET NO. CU303

SANITARY SEWER ADJUSTMENT NO. 1
SEE SHEET NO. CU101

4.81 L.F. 12" RJ DI PIPE
REMOVE EXIST. PIPE

16.82 L.F. 12" RJ PIPE
REMOVE EXIST. PIPE

7.62 L.F. 12" RJ DI PIPE
REMOVE EXIST. PIPE

25.00 L.F. 12" RJ PIPE
REMOVE EXIST. PIPE

17.55 L.F. 12" RJ PIPE
REMOVE EXIST. PIPE

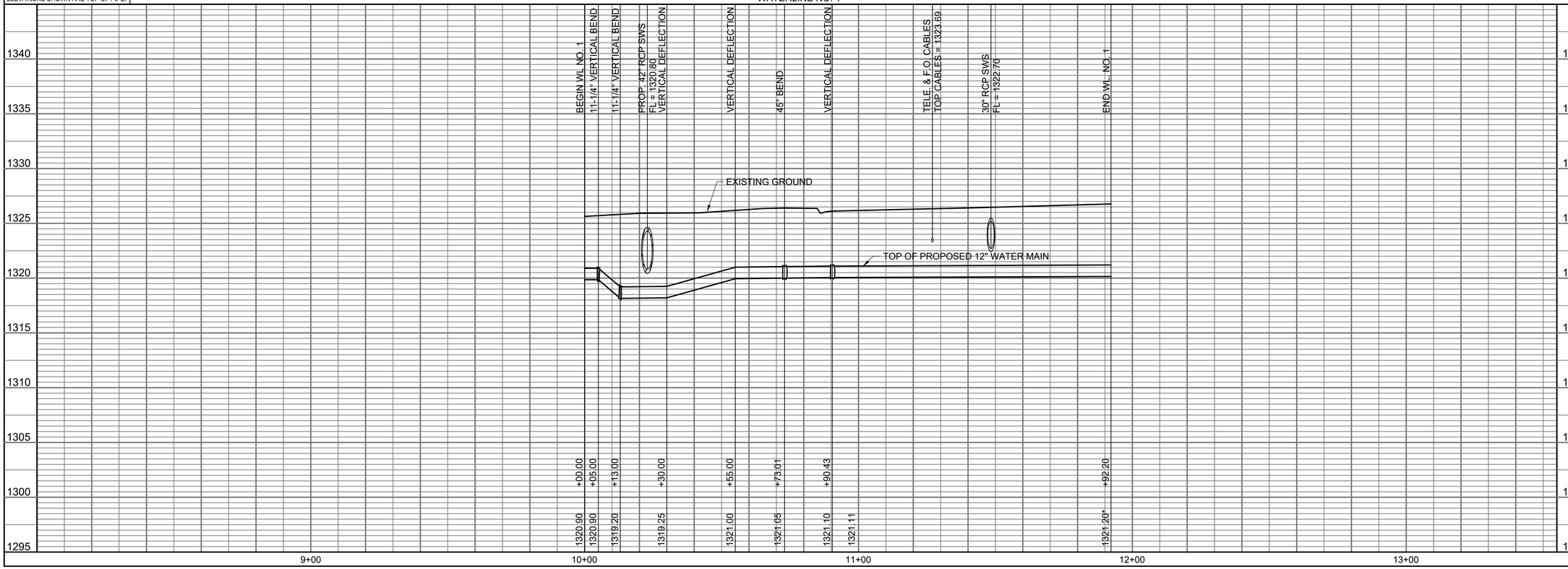
16.50 L.F. 12" RJ PIPE

101.32 L.F. 12" RJ PIPE
REMOVE EXIST. PIPE

WATERLINE NO. 1

* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 12" WATERLINE AT STATION 10+00.00 AND STATION 11+92.20 TO VERIFY PIPE SIZE, TYPE, FITTINGS, AND HORIZONTAL AND VERTICAL LOCATION. THE CONTRACTOR SHALL REPORT HIS FINDINGS TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

UNLESS NOTED OTHERWISE.
ELEVATIONS SHOWN ARE TOP OF PIPE.



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

CITY OF WICHITA

TO SERVE

TREVOR KAUFMAN
LICENSED
26008
09/14/2022
KANSAS
PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS

NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

WATERLINE NO. 1

CU302

SAVED 5/16/2022 10:45:16 AM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:24:29 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNI\DRAWINGS\210253-000-CU302.DWG

PLAN: LAT. & LONG. 0 10' 20' 40'

PROFILE: HORIZ. SAME AS ABOVE

VERT:

LEGEND

(5000) = SEE SHEET NO. CU300 FOR WATERLINE COORDINATES (TYP.)

N: 1709922.4856, E: 1653444.8139
EXISTING 12" WATERLINE *
CUT IN 1 - 12" BUTTERFLY ANCHORED SPECIAL VALVE ASSEMBLY
TOP VALVE BOX EL.= MATCH EXIST
ALL FITTINGS, PIPES, ADAPTORS, AND OTHER INCIDENTALS NECESSARY TO PERFORM THIS TIE IN SHOULD BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR PIPE.

(5018)

WATERLINE NO. 1
SEE SHEET NO. CU302

N: 1709927.9685, E: 1653926.9340
EXISTING 12" WATERLINE *
CUT IN 1 - 12" BUTTERFLY ANCHORED SPECIAL VALVE ASSEMBLY
TOP VALVE BOX EL.= MATCH EXIST
ALL FITTINGS, PIPES, ADAPTORS, AND OTHER INCIDENTALS NECESSARY TO PERFORM THIS TIE IN SHOULD BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR PIPE.

(5019)

DOROTHY J. MASON
LOTS 1 & 2
BRIDGEPORT
INDUSTRIAL PARK II

PROP. 42" RCP FL. = 1321.00

SDC #30
' X 3.00' CONC. INLET
TOP= 1325.88
= 1322.63 15" RCP (W)

2" STEEL GAS LINE (KANSAS GAS SERVICE)

SDC #29
11.30' X 3.00' CONC. INLET
TOP= 1325.90
FL= 1322.80 18" RCP (W)

2- DROP BURIED FIBER OPTIC RCP (KDOT)

PROP. 42" RCP (BY OTHERS)

2" PLASTIC GAS LINE (KANSAS GAS SERVICE)

43+00 144+00 CL 37TH STREET NORTH 145+00 146+00 147+00 148+00

UNKNOWN CABLES E-W, TOP ELEV.= 1321.52
12" AC WATERLINE, TOP ELEV.= 1321.19

LIMITS OF PROP. PVMT. (BY OTHERS)

CONC.

INTERSTATE-135 (SOUTH BOUND)

INTERSTATE-135 (NORTH BOUND)

6" STEEL GAS LINE (KANSAS GAS SERVICE)

KANSAS GAS SERVICE

SDC #27
6.35' X 3.00' CONC. INLET
TOP= 1326.47
FL= 1323.02 15" RCP (S)

BURIED TELE

30" RCP SWS

15" RCP SWS

12" AC WATERLINE

CENTURY LINK& KDOT CABLES N-S, TOP ELEV.= 1323.69

BURIED FIBER OPTIC LINE (COX)

OVERHEAD ELECTRIC (EVERGY)

BURIED FIBER OPTIC LINE (AT&T)

BURIED ELECTRIC (EVERGY)

12" AC WATERLINE, TOP ELEV.= 1320.90

PROP. 42" RCP FL. = 1320.76

BURIED FIBER OPTIC TOP ELEV.= 1323.97
PER INFO. FROM COX

METAL HANDHOLE

SSM #2

8" PVC SS LINE

R/W

GATE

SSM #2
PRECAST CONCRETE MANHOLE
TOP= 1325.47
FL= 1318.62 6" PVC (S)
FL= 1318.06 8" PVC (W)

WATER SERVICE LINE

2" PLASTIC GAS LINE (KANSAS GAS SERVICE)

BURIED FIBER OPTIC LINE (CENTURY LINK)

BURIED ELECTRIC (EVERGY)

UF O. TEL (KDOT)

SDC #28
6.35' X 3.00' CONC. INLET
TOP= 1326.35
FL= 1322.86 15" RCP (E)
FL= 1322.80 15" RCP (N)
FL= 1322.29 18" RCP (SW)

HANDHOLE

BURIED ELECTRIC (EVERGY)

BURIED FIBER OPTIC

TH, LLC
2, BLK. A

BLDG.

1+00

SANITARY SEWER ADJUSTMENT NO. 1
SEE SHEET NO. CU101

SANITARY SEWER SERVICE LINE NO. 1
SEE SHEET NO. CU104

* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 12" WATERLINE TO VERIFY PIPE SIZE, TYPE, FITTINGS, AND HORIZONTAL AND VERTICAL LOCATION. THE CONTRACTOR SHALL REPORT HIS FINDINGS TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

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

CITY OF WICHITA

TREVOR KAUFMAN
LICENSED
26008
09/14/2022
KANSAS
PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS

TO SERVE

NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-21-00292
WL: CITY OF WICHITA PROJ. NO. 448-21-0341

Issue:			

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

WATERLINE NO. 1 - VALVES

CU303

SAVED 9/13/2022 10:22:17 AM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:24:47 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNI\DRAWINGS\210253-000-CU303.DWG

N: 1706096.3297, E: 1654442.6884
WL No. 2, STA. 10+00.00=
CL HYDRAULIC, STA. 42+77.00, 48' L
1- 2" BLOWOFF ASSEMBLY W/ RJ CAP
TOP VALVE BOX EL.= 1320.14
BEGIN WATERLINE NO. 2

5011

N: 1706116.2861, E: 1654444.0093
WL No. 2, STA. 10+20.00=
CL HYDRAULIC, Sta. 42+96.92, 46' L
1- FIRE HYDRANT ASSEMBLY W/ RJ TEE
L= 8'
TOP VALVE BOX EL.= 1320.56
FH BURY LINE EL.= 1321.19
1- 8" RJ VALVE ASSEMBLY (S)
TOP VALVE BOX EL.= 1320.14

5012

2" METER SETTING INVOLVING EXISTING 2" METER VAULT
SEE DETAIL, SHEET NO. C402

N: 1706293.8890, E: 1654455.7642
WL No. 2, STA. 11+97.99=
CL HYDRAULIC, STA. 44+74.24, 31' L
HORIZONTAL DEFLECTION
DEFL.= 2°31'12"

5013

N: 1706313.8841, E: 1654456.2063
WL No. 2, STA. 12+17.99=
CL HYDRAULIC, STA. 44+94.22, 30' L
HORIZONTAL DEFLECTION
DEFL.= 2°29'50"

5014

CAUTION !!!
BURIED FIBER OPTIC LINE
(AT&T)

CAUTION !!!
GAS SERVICE LINE
(KGS)

REMOVE AND REPLACE
5 S.Y. ASPHALT
PAVEMENT.

N: 1706411.3568, E: 1654454.1122
WL No. 2, STA. 13+15.49=
CL HYDRAULIC, STA. 45+91.71, 30' L
1- FIRE HYDRANT ASSEMBLY
L= 4'
TOP VALVE BOX EL.= 1319.84
FH BURY LINE EL.= 1319.59

5015

CAUTION !!!
BURIED TELEPHONE
(AT&T)

CAUTION !!!
BURIED CATV
(COX COMMUNICATIONS)

N: 1706495.8506, E: 1654452.2947
WL No. 2, STA. 14+00.00=
CL HYDRAULIC, STA. 46+76.23, 30' L
MATCH POINT

LEGEND

- X = DENOTES WATERLINE TO BE ABANDONED IN PLACE.
- [= DENOTES CAP/PLUG BY THE CONTRACTOR. (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)
- ⊛ = CLOSE VALVE, REMOVE VALVE BOX (SALVAGE TO CITY) (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)
- (5000) = SEE SHEET NO. CU301 FOR WATERLINE COORDINATES (TYP.)
- = PROPOSED SILT FENCE

PLAN: LAT. & LONG. 0 10' 20' 40'
PROFILE: HORIZ. SAME AS ABOVE
VERT:

R/W
OVERHEAD ELECTRIC (EVERGY)
TOP NUT EL= 1312.77
TOP NUT EL= 1310.49
FIBER OPTIC CABLE E-W, TOP ELEV.= 1313.18
FIBER OPTIC CABLE E-W, TOP ELEV.= 1313.99
GENERAL LOCATION (BURIED) AND BROKEN
BURIED TELEPHONE (AT&T)
BURIED CABLE LINE (COX)
TELEPHONE N-S, TOP ELEV.= 1314.37
TELEPHONE E-W, TOP ELEV.= 1314.94
TELEPHONE E-W, TOP ELEV.= 1315.43
TELEPHONE N-S, TOP ELEV.= 1317.09
CABLE LINE N-S TOP ELEV.= 1315.14 PER INFO. FROM COX
TELEPHONE N-S, TOP ELEV.= 1315.14
CL HYDRAULIC
BURIED FIBER OPTIC
GAS SERVICE LINE (KANSAS GAS SERVICE)
OVERHEAD ELECTRIC (EVERGY)
BURIED TELEPHONE
BURIED CABLE LINE

10+00 11+00 12+00 13+00 14+00 43+00 44+00 45+00 46+00 47+00

19.58 L.F. 8" RJ PIPE BY DIRECTIONAL DRILL
6.21 L.F. 8" RJ PIPE BY DIRECTIONAL DRILL
56.12 L.F. 8" RJ PIPE BY DIRECTIONAL DRILL
115.25 L.F. 8" RJ PIPE BY DIRECTIONAL DRILL
20.00 L.F. 8" RJ PIPE BY DIRECTIONAL DRILL
97.08 L.F. 8" RJ PIPE BY DIRECTIONAL DRILL
64.32 L.F. 8" RJ PIPE BY DIRECTIONAL DRILL
19.78 L.F. 8" RJ PIPE BY DIRECTIONAL DRILL

UNLESS NOTED OTHERWISE, ELEVATIONS SHOWN ARE TOP OF PIPE.

WATERLINE NO. 2

VERTICAL DEFLECTION BEGIN WL NO. 2 +00.00 1316.20
Vertical Deflection +20.00 1316.36
Vertical Deflection +76.53 1315.54
Vertical Deflection +82.74 1315.50
HORIZ. DEFLECTION +97.99 1315.63
HORIZ. DEFLECTION +17.99 1315.65
BURIED FIBER OPTIC 1315.52
GAS SERVICE LINE TOP OF PIPE= VERIFY 1315.74
Vertical Deflection +15.49 1315.76
BURIED TELEPHONE Vertical Deflection +80.22 1312.49
BURIED CABLE TV BURIED TELEPHONE PT (VERTICAL) +00.00 1311.98
MATCH POINT

EXISTING GROUND
400' NOMINAL RADIUS (VERTICAL)
TOP OF PROPOSED 8" WATER MAIN
1" (MIN.)
400' NOMINAL RADIUS (VERTICAL)

1335 1330 1325 1320 1315 1310 1305 1300 1295 1290

10+00 11+00 12+00 13+00 14+00

SAVED 9/13/2022 10:31:26 AM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:25:02 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUN\DRAWINGS\210253-000-CU304.DWG

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

CITY OF WICHITA

TREVOR KAUFMAN LICENSED 26008 09/14/2022 KANSAS PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS

TO SERVE

NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

WATERLINE NO. 2

CU304

NOTE: IF CASING AND CARRIER PIPE IS INSTALLED VIA OPEN CUT METHODS AS SHOWN, FLUSHED AND VIBRATED SAND FILL SHALL BE UTILIZED UNDER PAVEMENT. THIS SHALL BE CONSIDERED SUBSIDIARY TO THE PIPE. AT CONTRACTORS OPTION, THE CASING AND CARRIER PIPE CAN BE INSTALLED USING DIRECTIONAL DRILLING METHODS. NO ADDITIONAL PAYMENT SHALL BE MADE.

LEGEND

- X = DENOTES WATERLINE TO BE ABANDONED IN PLACE.
- [= DENOTES CAP/PLUG BY THE CONTRACTOR. (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)
- (*) = CLOSE VALVE, REMOVE VALVE BOX (SALVAGE TO CITY) (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)
- (5000) = SEE SHEET NO. CU301 FOR WATERLINE COORDINATES (TYP.)
- = PROPOSED SILT FENCE

PLAN: LAT. & LONG. 0 10' 20' 40'
PROFILE: HORIZ. SAME AS ABOVE
VERT:

N: 1706495.8506, E: 1654452.2947
WL No. 2, STA. 14+00.00=
CL HYDRAULIC, STA. 46+76.23, 30' L
MATCH POINT

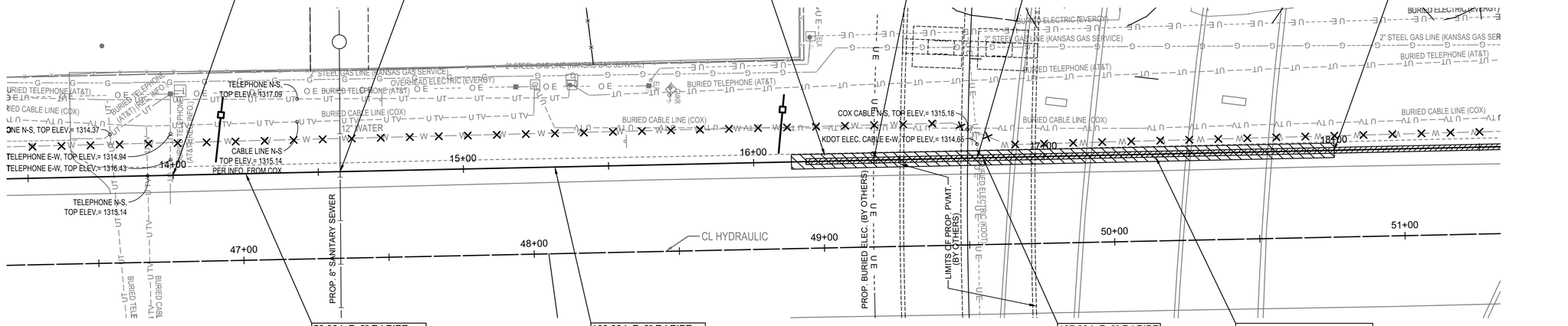
CAUTION
PROPOSED 8"
SANITARY SEWER

REMOVE AND REPLACE
120 S.Y. ASPHALT
PAVEMENT.

CAUTION !!!
PROPOSED
BURIED ELECTRIC
(BY OTHERS)

CAUTION !!!
BURIED ELECTRIC
(KDOT)

N: 1706895.7581, E: 1654443.6922
WL No. 2, STA. 18+00.00=
CL HYDRAULIC, STA. 50+76.23, 30' L
MATCH POINT



50.00 L.F. 8" RJ PIPE
BY DIRECTIONAL DRILL

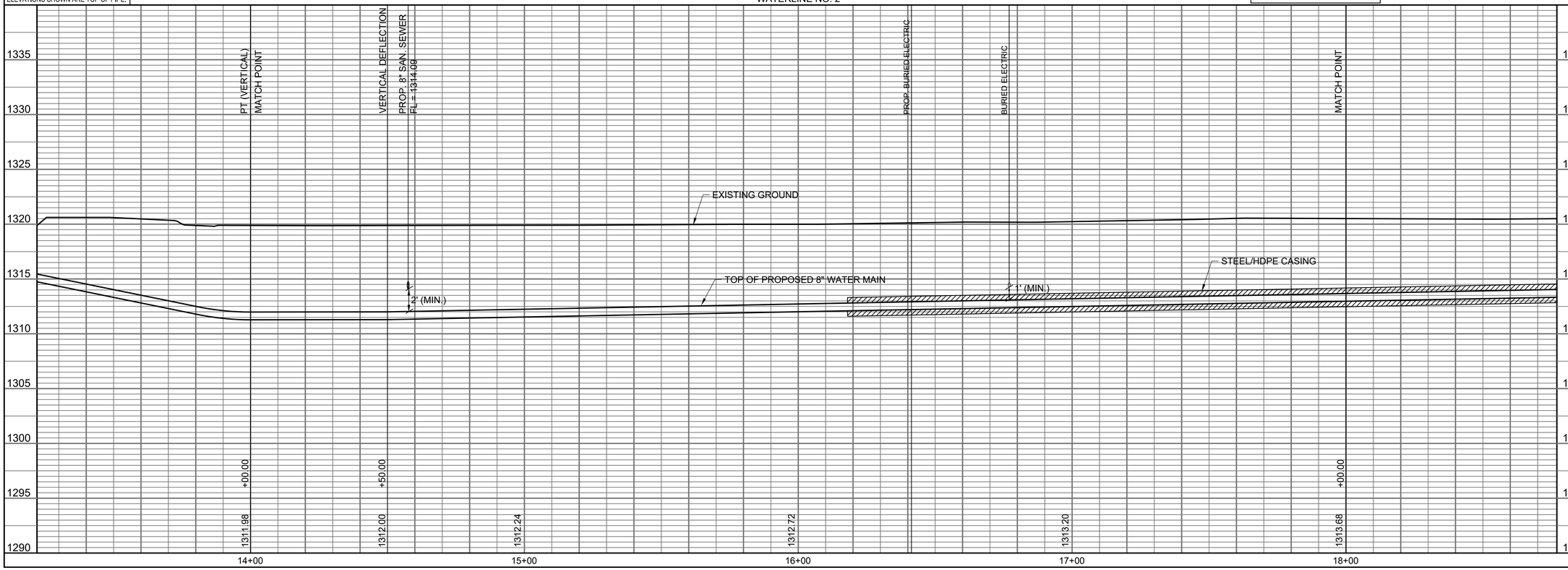
163.00 L.F. 8" RJ PIPE
BY DIRECTIONAL DRILL

187.00 L.F. 8" RJ PIPE

STA. 16+18 TO STA. 18+00
INSTALL 182 L.F.
STEEL/HDPE CASING
MIN. I.D. = 18"

UNLESS NOTED OTHERWISE, ELEVATIONS SHOWN ARE TOP OF PIPE.

WATERLINE NO. 2



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

CITY OF WICHITA

TREVOR KAUFMAN
LICENSED
26008
09/14/2022
KANSAS
PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

WATERLINE NO. 2

CU305

SAVED 9/13/2022 10:43:16 AM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:25:17 AM BY KURTIS.DEKAT
U:\WICHITA-C\VIL\2021\210253000\MUN\DRAWINGS\210253-000-CU305.DWG

* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 12" WATERLINE AT STATION 21+90.44 TO VERIFY PIPE SIZE, TYPE, FITTINGS, AND HORIZONTAL AND VERTICAL LOCATION. THE CONTRACTOR SHALL REPORT HIS FINDINGS TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

NOTE: IF CASING AND CARRIER PIPE IS INSTALLED VIA OPEN CUT METHODS AS SHOWN, FLUSHED AND VIBRATED SAND FILL SHALL BE UTILIZED UNDER PAVEMENT. THIS SHALL BE CONSIDERED SUBSIDIARY TO THE PIPE. AT CONTRACTORS OPTION, THE CASING AND CARRIER PIPE CAN BE INSTALLED USING DIRECTIONAL DRILLING METHODS. NO ADDITIONAL PAYMENT SHALL BE MADE.

LEGEND

- X = DENOTES WATERLINE TO BE ABANDONED IN PLACE.
- [= DENOTES CAP/PLUG BY THE CONTRACTOR. (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)
- ⊛ = CLOSE VALVE, REMOVE VALVE BOX (SALVAGE TO CITY) (INCLUDES REMOVAL AND REPLACEMENT OF PAVEMENT)
- (5000) = SEE SHEET NO. CU301 FOR WATERLINE COORDINATES (TYP.)
- = PROPOSED SILT FENCE

PLAN: LAT. & LONG. 0 10' 20' 40' 80'
PROFILE: HORIZ. SAME AS ABOVE
VERT: 0

N: 1706895.7580, E: 1654443.6890
WL No. 2, Sta. 18+00.00=
CL HYDRAULIC, STA. 50+76.23, 30' L
MATCH POINT

REMOVE AND REPLACE 250 S.Y. ASPHALT PAVEMENT.

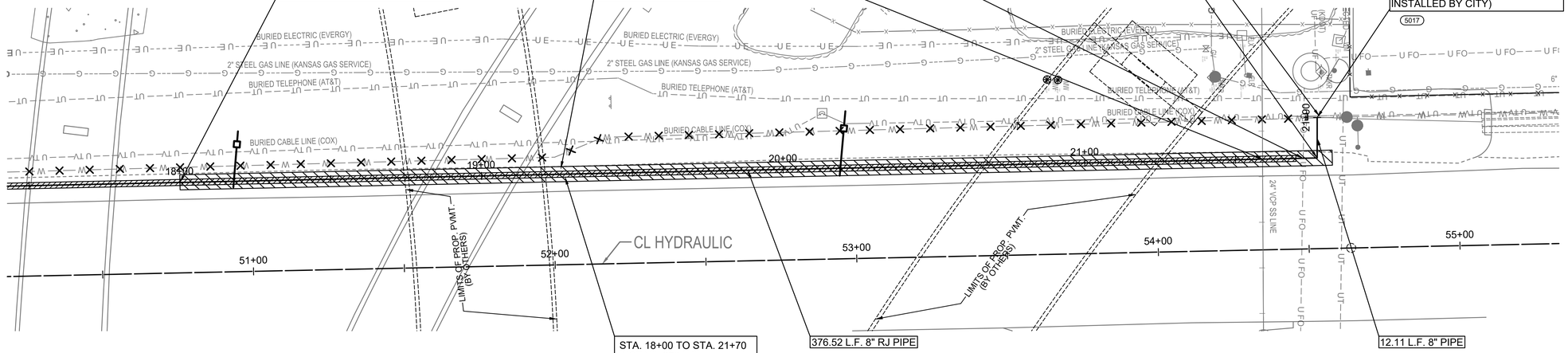
CAUTION !!! EXISTING 24" SANITARY SEWER

CAUTION !!! BURIED FIBER OPTIC LINE (COX)

N: 1707272.7307, E: 1654435.5831
WL No. 2, STA. 21+77.06=
CL HYDRAULIC, STA. 54+53.28, 30' L
1- 8" 90° RJ BEND
DEFL.= 88°44'56"
(5016)

CAUTION !!! BURIED CATV (COX COMMUNICATIONS)

N: 1707272.7191, E: 1654422.2058
WL No. 2, Sta. 21+90.44=
CL HYDRAULIC, Sta. 54+53.56, 43' L
EXISTING 12" WATER MAIN*
1- 12" X 8" TAPPING SLEEVE
1- 8" TAPPPING VALVE
1- 6" VALVE BOX
TOP VALVE BOX EL.= 1319.44
(SLEEVE AND VALVE INSTALLED BY CITY)
(5017)

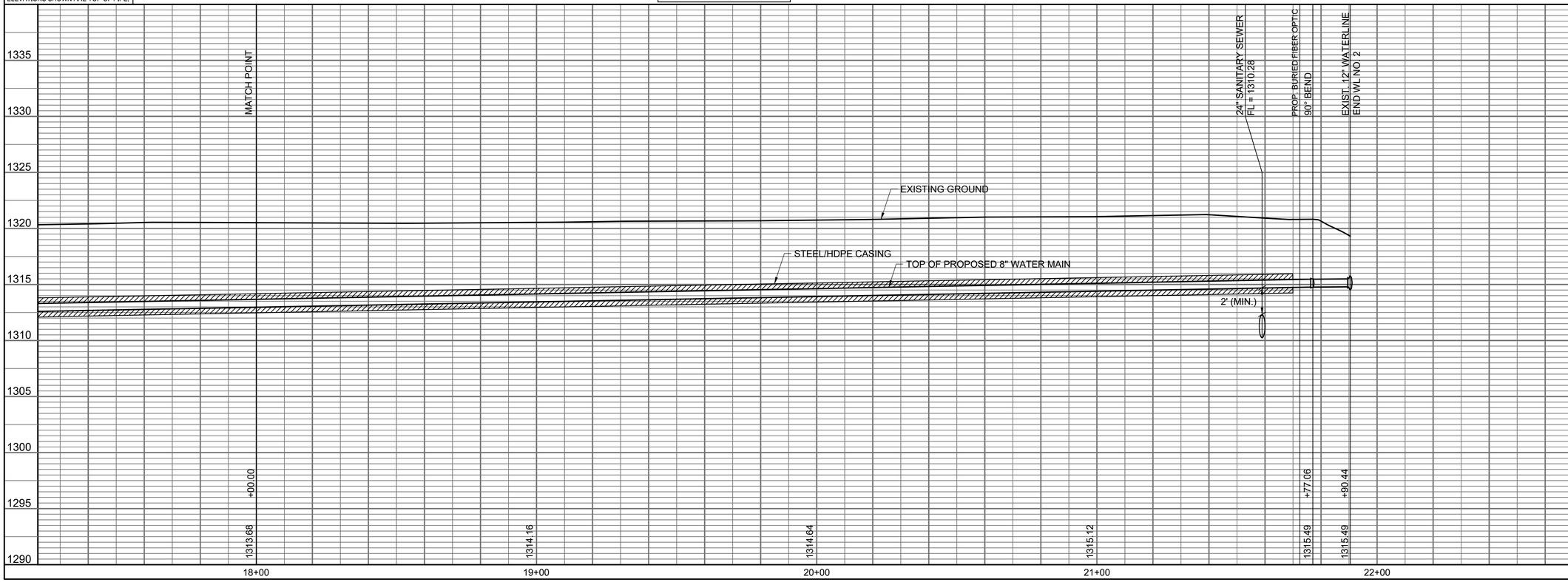


STA. 18+00 TO STA. 21+70
INSTALL 370 L.F.
STEEL/HDPE CASING.
MIN. I.D. = 18"

376.52 L.F. 8" RJ PIPE

12.11 L.F. 8" PIPE

UNLESS NOTED OTHERWISE, ELEVATIONS SHOWN ARE TOP OF PIPE.



SAVED 5/13/2022 2:14:27 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:25:32 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253000\MUN\DRAWINGS\210253-000-CU306.DWG

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

CITY OF WICHITA

TREVOR KAUFMAN
LICENSED
26008
09/14/2022
KANSAS
PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION

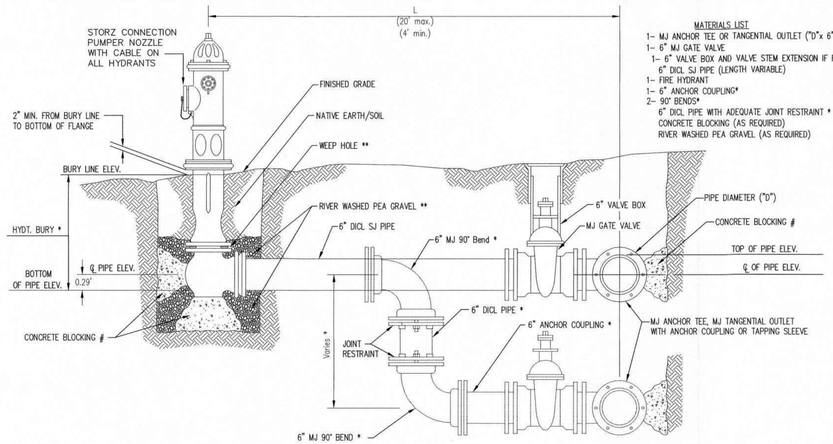
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

WATERLINE NO. 2

CU306



MATERIALS LIST
1- MJ ANCHOR TEE OR TANGENTIAL OUTLET ("D"x 6")
1- 6" MJ GATE VALVE
1- 6" VALVE BOX AND VALVE STEM EXTENSION IF REQUIRED *
6" DICL SJ PIPE (LENGTH VARIABLE)
1- FIRE HYDRANT
1- 6" ANCHOR COUPLING*
2- 90° BENDS*
6" DICL PIPE WITH ADEQUATE JOINT RESTRAINT *
CONCRETE BLOCKING (AS REQUIRED)
RIVER WASHED PEA GRAVEL (AS REQUIRED)

FIRE HYDRANTS REQUIRED				
STATION	BURY LINE ELEVATION	TOP OF PIPE ELEVATION	FIRE HYDRANT BURY REQUIRED*	VALVE STEM EXT. REQUIRED (ft)*
WL 2,Sta. 10+20.00	1321.2	1316.36	5.5	–
WL 2,Sta. 13+15.49	1319.6	1315.76	4.5	–

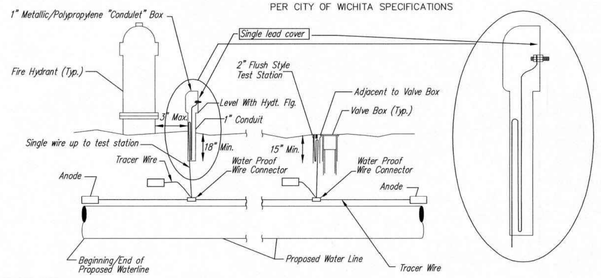
* IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DICL PIPE AS NECESSARY FOR VERTICAL ADJUSTMENT. THE CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING AT HYDRANT AND MEGALUGS, OR SIMILAR RESTRAINT BETWEEN 90° BENDS TO SECURE ALL FITTINGS DURING TESTING AND OPERATION. THE CONTRACTOR SHALL PROVIDE A VALVE STEM EXTENSION PER DETAIL THIS SHEET.

** CAUTION: WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES. PLACE 1 CUBIC FOOT OF RIVER WASHED PEA GRAVEL AROUND EACH WEEP HOLE.

CONCRETE THRUST BLOCKING SHALL BE KEPT CLEAR OF BOLTS, NUTS, AND MJ ACCESSORIES.

FIRE HYDRANT ASSEMBLY

PER CITY OF WICHITA SPECIFICATIONS



TRACER WIRE

Conductive type pipe locator/tracer wire shall be install to locate all waterline pipe regardless of pipe material. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the waterline and pulled with the pipe. A waterproof connector shall be used at splice locations. A complete list of approved tracer wire and waterproof connectors can be found on the City of Wichita's website at www.wichita.gov.

WIRE

The tracer wire shall be Blue No. 12 AWG CCS with 45 mil HDPE insulation. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. Wire connectors shall be installed per manufacturer recommendations. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

TEST STATIONS

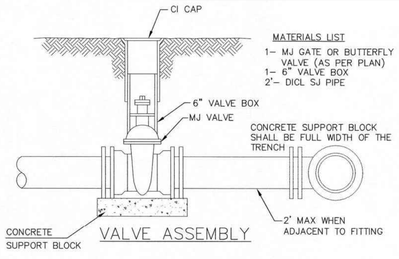
*The test station for fire hydrant application shall be a 1" "conduilet" style station as manufactured by AGRA Industries with a removable solid cover having a single lead extending from the face or approved equal. The "conduit" style test station shall be attached to a 1" rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "WATER" stamped or molded into the lid. The test station for valve applications shall be a 2" flush style test station with wire connector on lid. Model # T2PH7B1LP Handley Industries or CD14*TP SnakePit as manufactured by Copperhead Industries or approved equal. The flush style shall have the word "WATER" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be install to allow 12" of wire within the test station. The location of all test stations shall be recorded, and shown in the as-built drawings. Flush style test stations shall not be installed in pavement or sidewalk unless approved by the Engineer. Contractor shall extend tracer wire & move flush mount test station to nearest location out of pavement or sidewalk.*

ANODES

The anodes shall be 3 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to 12 AWG CCS which shall be extended to the test station.

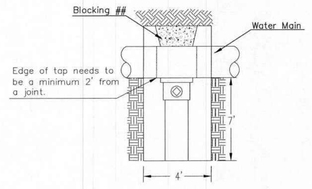
TRACER WIRE DETAIL

COST IS SUBSIDIARY TO PIPE INSTALLATION



MATERIALS LIST
1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
1- 6" VALVE BOX
2'- DICL SJ PIPE

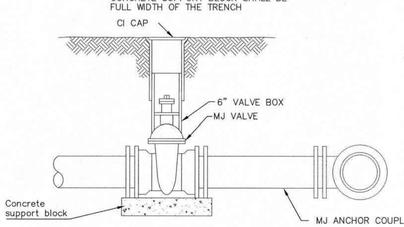
VALVE ASSEMBLY



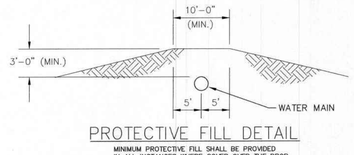
CITY TAP

When the City of Wichita makes tap, blocking is to be done by Contractor

MATERIALS LIST
1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
1-MJ ANCHOR COUPLING (12" OR SMALLER)
1-6" VALVE BOX
CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

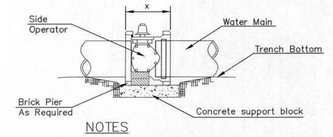


ANCHORED VALVE ASSEMBLY



PROTECTIVE FILL DETAIL

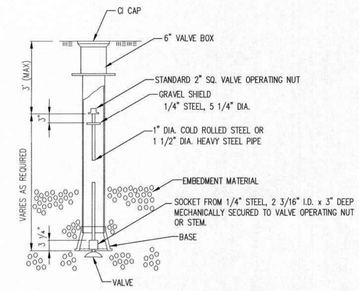
MINIMUM PROTECTIVE FILL SHALL BE PROVIDED IN ALL INSTANCES WHERE COVER OVER THE PROP. WATER LINE IS LESS THAN 3'.
(COST SUBSIDIARY TO PIPE INSTALLATION)



NOTES

1. This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
2. 6" Valve Box and Cover required per City of Wichita Std. Specifications.
3. Conc. Support Block to be full width of trench.

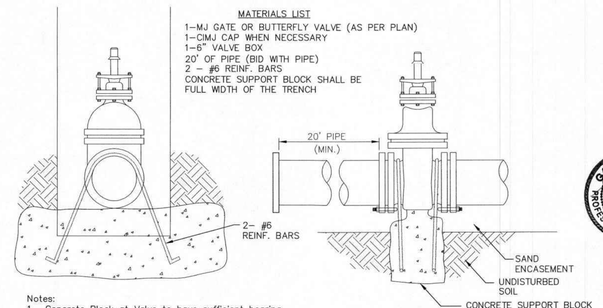
CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION



VALVE STEM EXTENSION DETAIL

NOTE: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'.

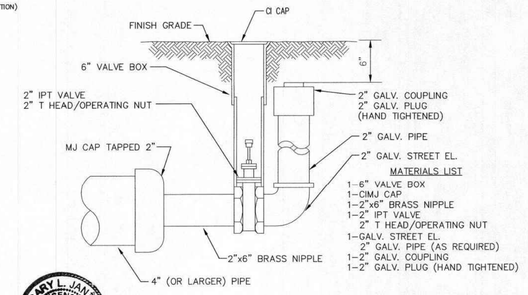
MATERIALS LIST
1-MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
1-CIMJ CAP WHEN NECESSARY
1-6" VALVE BOX
20' OF PIPE (BID WITH PIPE)
2 - #6 REINF. BARS
CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH



Notes:
1. Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
2. The thrust block shall be constructed such that bolts, nuts, and other MJ accessories are kept clear of concrete.
3. All valves at dead ends and at other locations as called out on the plans shall be blocked as shown here.

THRUST AT VALVES	
VALVE	THRUST AT 150 #/in²
4"	1809 lbs.
6"	4245 lbs.
8"	7540 lbs.
12"	16965 lbs.

ANCHORED VALVE ASSEMBLY, SPECIAL



MATERIALS LIST
1-6" VALVE BOX
1-CIMJ CAP
1-2"x6" BRASS NIPPLE
1-2" IPT VALVE
2" T HEAD/OPERATING NUT
1-GALV. STREET EL.
2" GALV. PIPE (AS REQUIRED)
1-2" GALV. COUPLING
1-2" GALV. PLUG (HAND TIGHTENED)

2" BLOWOFF ASSEMBLY

GARY L. JANZEN LICENSED 16284 KANSAS PROFESSIONAL ENGINEER
10/27/16

REVISED: OCTOBER 2016

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STANDARD WATER ASSEMBLY DETAIL

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

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

SHEET

WL-101

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

CITY OF WICHITA

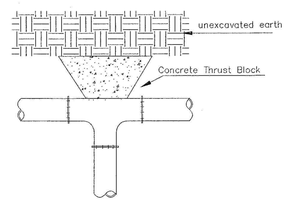
SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

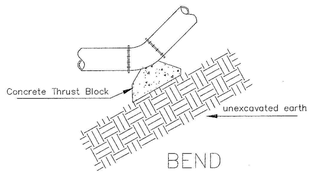
JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

STANDARD WATER ASSEMBLY DETAIL

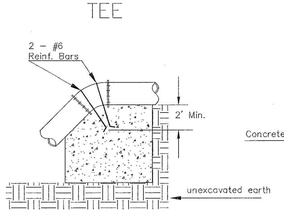
CU400



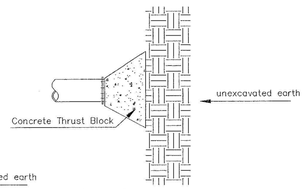
TEE



BEND



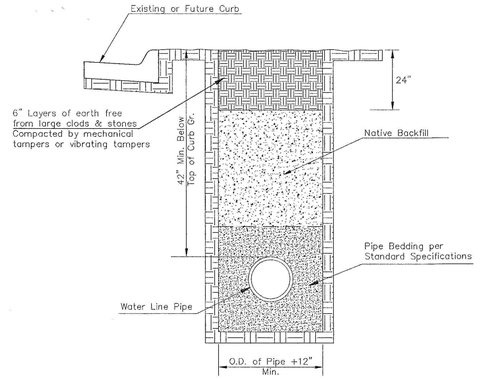
VERTICAL BEND



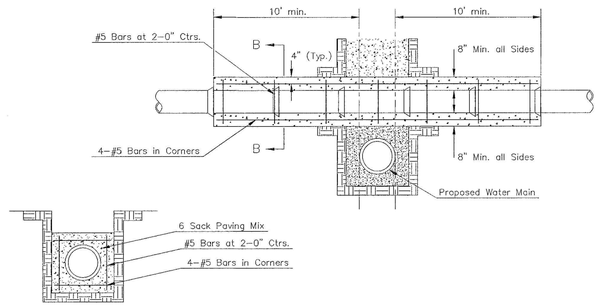
PLUG

PIPE SIZE	THRUST AT FITTINGS IN TONS--AT 150#/IN^{2}P					
	PLUG	90°	45°	22 1/2°	11 1/4°	TEE
6"	2.8	3.95	2.15	1.09	.55	2.8
8"	4.9	6.95	3.75	1.90	.96	4.9
12"	11.4	16.1	8.75	4.45	2.25	11.4
16"	20.15	28.5	15.4	7.85	3.95	20.15
20"	31.15	44.0	23.85	12.15	6.10	31.15
24"	44.55	63.0	34.1	17.4	8.75	44.55

TYPICAL THRUST BLOCKS



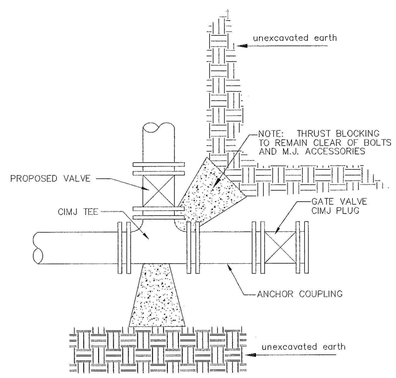
TRENCH COMPACTION IN ROAD RIGHT-OF-WAY



Note: Encasement to begin and end at a Bell on Sanitary Sewer Pipe.

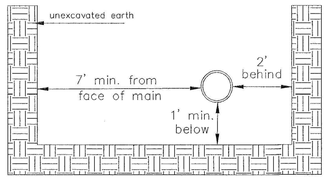
SECTION B-B

REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER



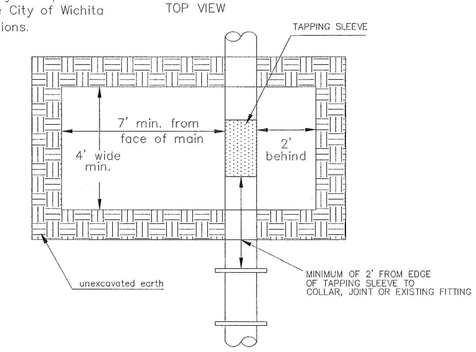
KEY BLOCK DETAIL

SIDE VIEW

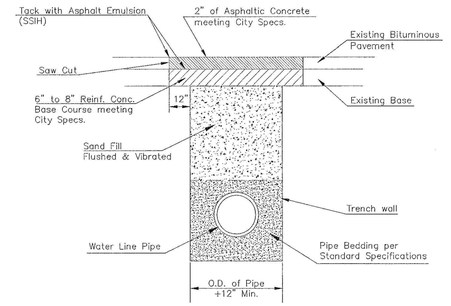


Note: When shoring is required it is to be per The City of Wichita Standard Specifications.

TOP VIEW



EXCAVATION FOR WET TAP



PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS

* PLANS GOVERN
UNLESS OTHERWISE NOTED ON PLANS

REVISED: JULY 2015

GARY L. JANZEN LICENSED 16294 KANSAS PROFESSIONAL ENGINEER
7/21/15

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

MISCELLANEOUS WATER DETAILS

CITY ENGINEER
GARY JANZEN, P.E..

PROJECT NUMBER	OCA NUMBER	DATE

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

SHEET

WL-104

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

CITY OF WICHITA

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

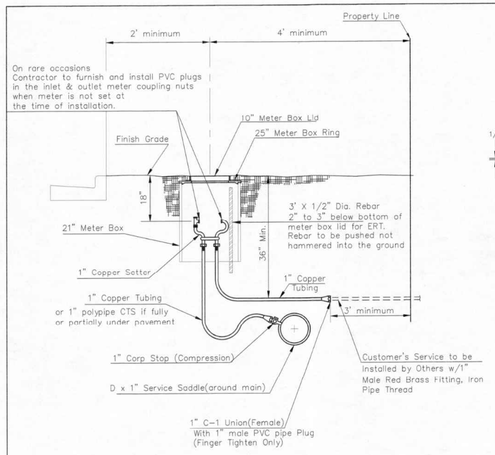
Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

MISCELLANEOUS WATER DETAILS

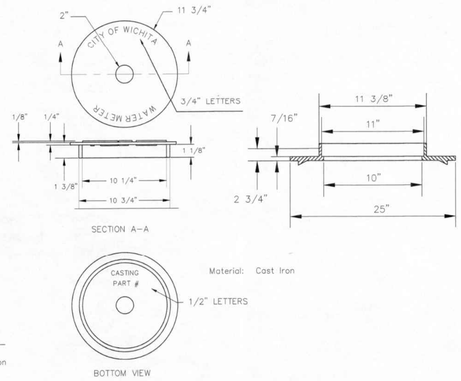
CU-401

SAVED 11/23/2021 4:34:04 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:25:40 AM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2021210253\000\MUNIDRAWINGS\210253-000-CU401.DWG

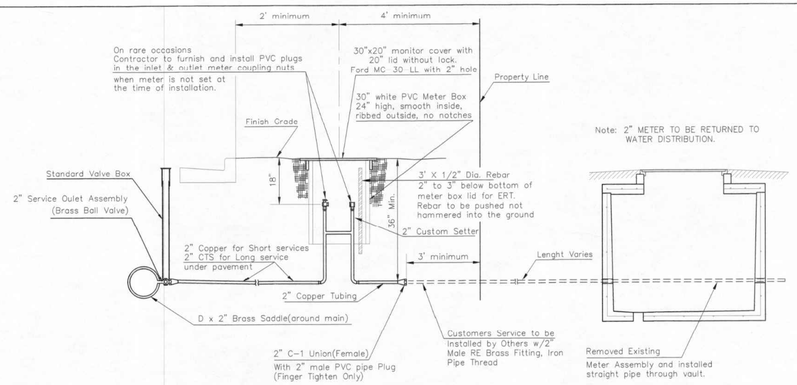


Minimum length of pigtail on consumer side is 36" of copper tubing from meter set.
Bore hole under paving shall be a maximum of 2" in diameter and a minimum of 36" below top of pavement.
Service Saddles are required on all mains.
Meter boxes will be located on each lot to be served, as indicated in the SPECIAL PROVISIONS

TYPICAL 1" METER SETTING



NOT TRAFFIC RATED
RING & LID FOR 1" METER BOX



TYPICAL 2" METER SETTING

Note: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'.

TYPICAL 2" METER SETTING INVOLVING EXISTING 2" METER VAULT

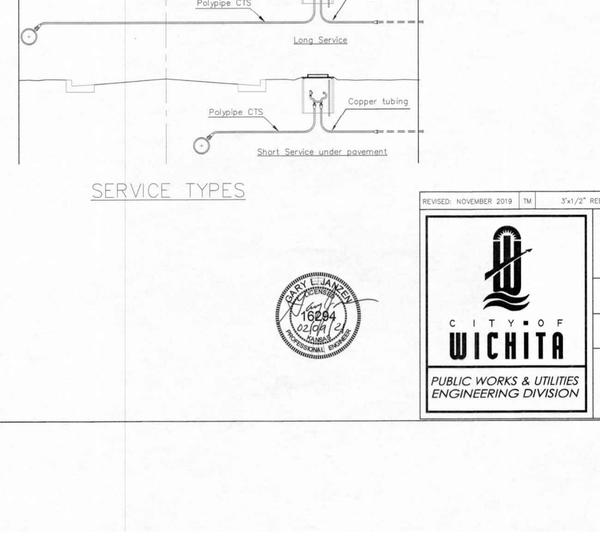
Note: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'.

1 – Ø Mueller Thread Corporation Stop
– Ø Type "K" Copper Tubing
1 – Ø Copper to Iron Union (Male)
1 – Ø Brass Curb Stop (Iron to Iron)
2 – Øx4" Brass Nipple

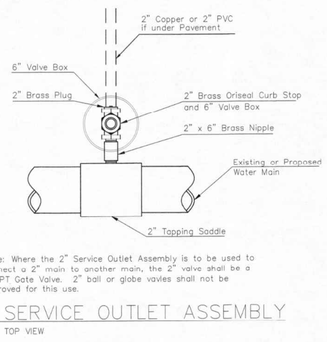
Air Release
2 – Ø Brass Elbows (90°)
1 – 1"x6" Brass Nipple
1 – 30" Monitor Cover
1 – 20" Meter Lid

NOTE:

THE 1"/2" AIR RELEASE ASSEMBLY WILL TYPICALLY BE USED ON WATER MAINS 24" AND SMALLER, AS SPECIFICALLY DESIGNATED IN THE PLANS. COMBINATION AIR RELEASE ASSEMBLIES WILL BE SPECIFICALLY DESIGNED FOR PROJECTS WITH LARGER MAINS, AND WILL BE INCLUDED IN THE PLANS.



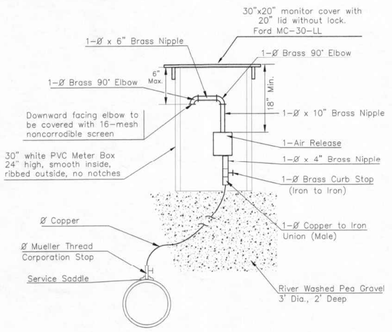
SERVICE TYPES



Note: Where the 2" Service Outlet Assembly is to be used to connect a 2" main to another main, the 2" valve shall be a 2" IPT Gate Valve. 2" ball or globe valves shall not be approved for this use.

2" SERVICE OUTLET ASSEMBLY

TOP VIEW



MATERIALS FOR 1" or 2" AIR RELEASE ASSEMBLY
Ø = 1" or 2"

REVISED: NOVEMBER 2019 | TM | 3'x1/2" REBAR IN 1" & 2" METER SETTINGS FOR ERT.

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STANDARD WATER SERVICE DETAIL

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

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

SHEET
_ of _

WL-102

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

CITY OF WICHITA

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

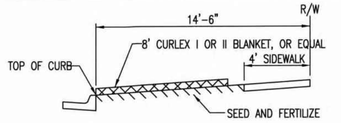
Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

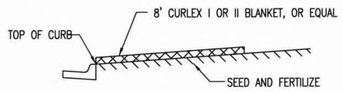
STANDARD WATER SERVICE DETAIL

CU402

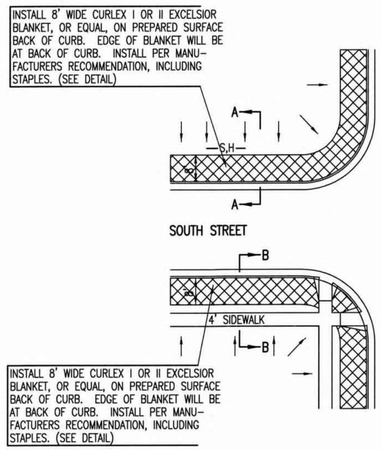
SAVED 11/23/2021 4:34:17 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:25:45 AM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNIDRAWINGS\210253-000-CU402.DWG



SECTION B-B



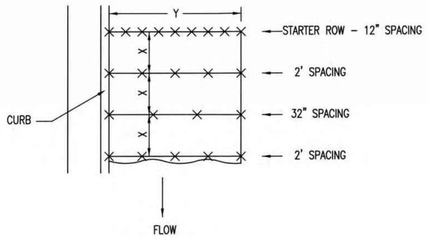
SECTION A-A



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

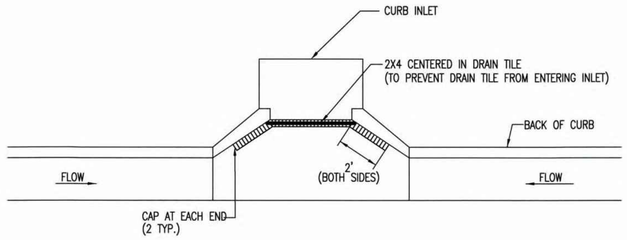


STAPLE PATTERN

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

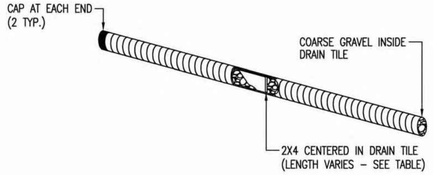
STAPLE

DETAILS FOR APPROVED EROSION CONTROL MAT



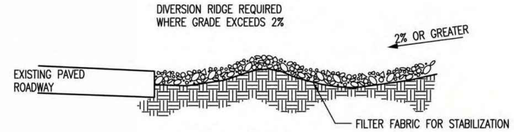
NOTE:
PLACE 4" PERFORATED PVC PIPE, FILLED WITH 1/2"-1" DIA. GRAVEL, IN FRONT OF CURB INLET AS SHOWN.

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

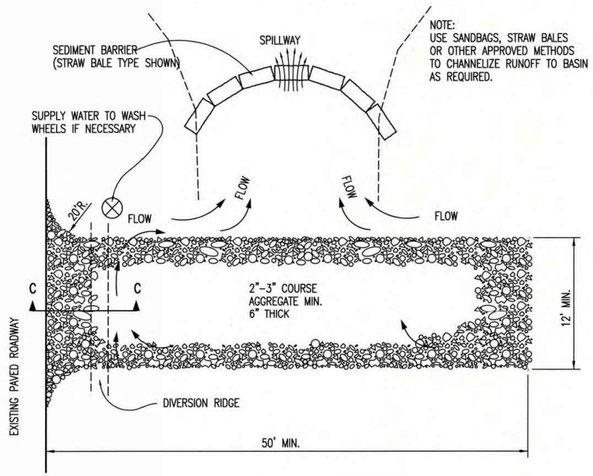


CURB INLET PROTECTION

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 19201 KANSAS PROFESSIONAL ENGINEER
05/13/13

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

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

SHEET

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

CITY OF WICHITA

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

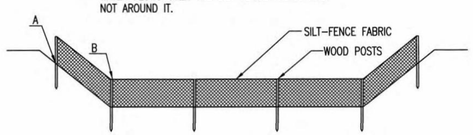
JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

EROSION CONTROL DETAILS

CU-500

SAVED 11/23/2021 4:34:41 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:25:49 AM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNI\DRAWINGS\210253-000-CU500.DWG

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)

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 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.

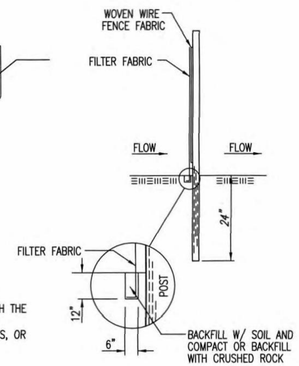
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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.

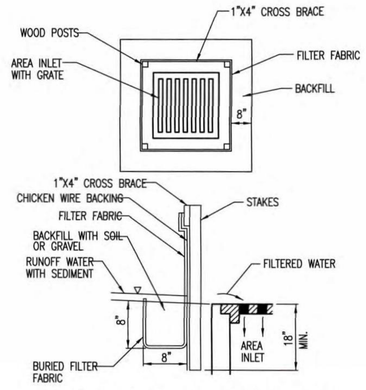
INSPECTION AND MAINTENANCE:

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?



ANCHOR TRENCH DETAIL



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.

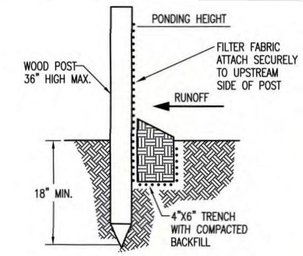
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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, 16292, KANSAS, PROFESSIONAL ENGINEER
05/24/13

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

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

SHEET

SW-502

SAVED 11/23/2021 4:34:53 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:25:54 AM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNI\DRAWINGS\210253-000-CU501.DWG

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

CITY OF WICHITA

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

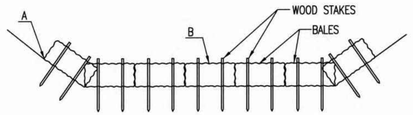
Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

EROSION CONTROL DETAILS

CU-501

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 CHECK SPACING

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".

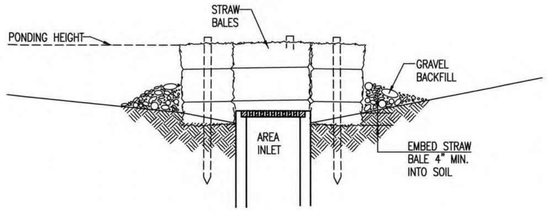
LIST OF COMMON PLACEMENT/INSTALLATION MISTAKES TO AVOID:

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.

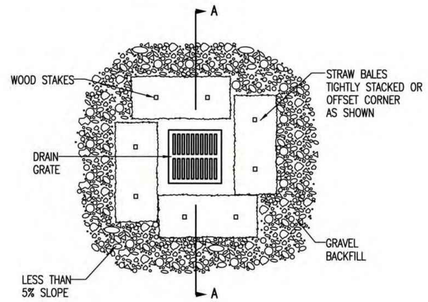
INSPECTION AND MAINTENANCE:

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.

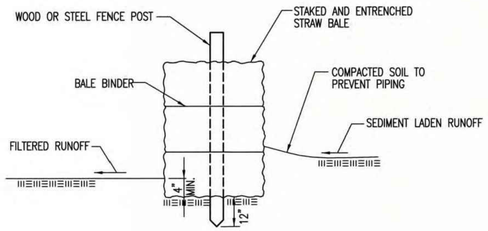
LIST OF COMMON PLACEMENT INSTALLATION MISTAKES TO AVOID:

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 OF 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 KANSAS PROFESSIONAL ENGINEER
05/30/13

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

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

SHEET

SW-503

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

CITY OF WICHITA

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

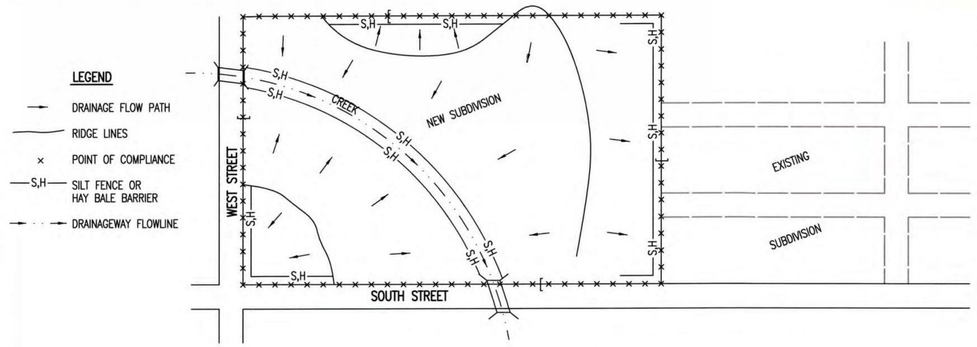
JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

EROSION CONTROL DETAILS

CU-502

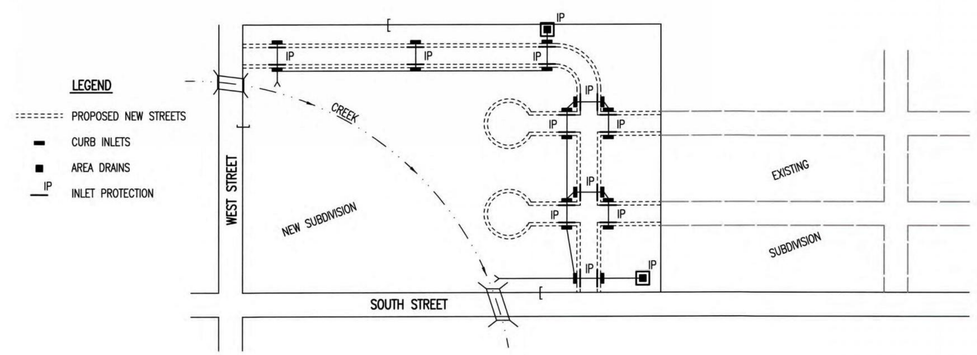
SAVED 11/23/2021 4:35:09 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:25:59 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253000\MUNI\DRAWINGS\210253-000-CU502.DWG

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



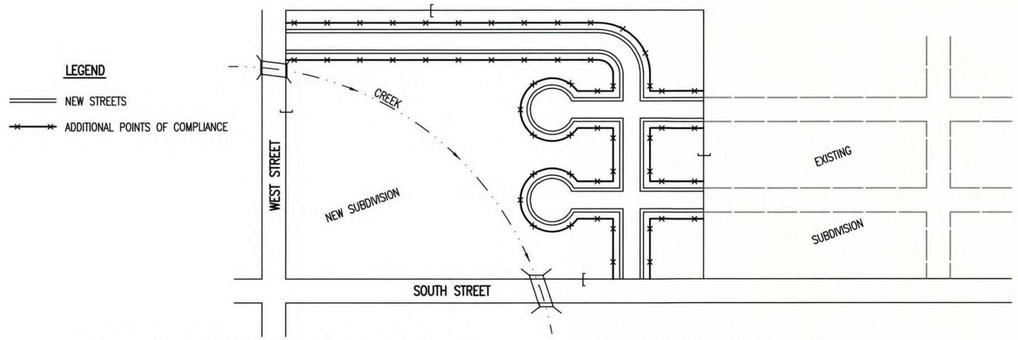
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2. 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 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.

PHASE 3 – STREET CONSTRUCTION

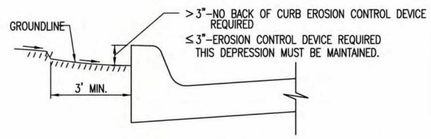


1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
   A. SUMP AREAS – INLET PROTECTION 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.

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 16294 PROFESSIONAL ENGINEER KANSAS
05/13/21

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

SUBDIVISION DEVELOPMENT PROCESS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

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

SHEET

SW–505

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

CITY OF WICHITA

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION
GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

EROSION CONTROL DETAILS

CU-503

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.

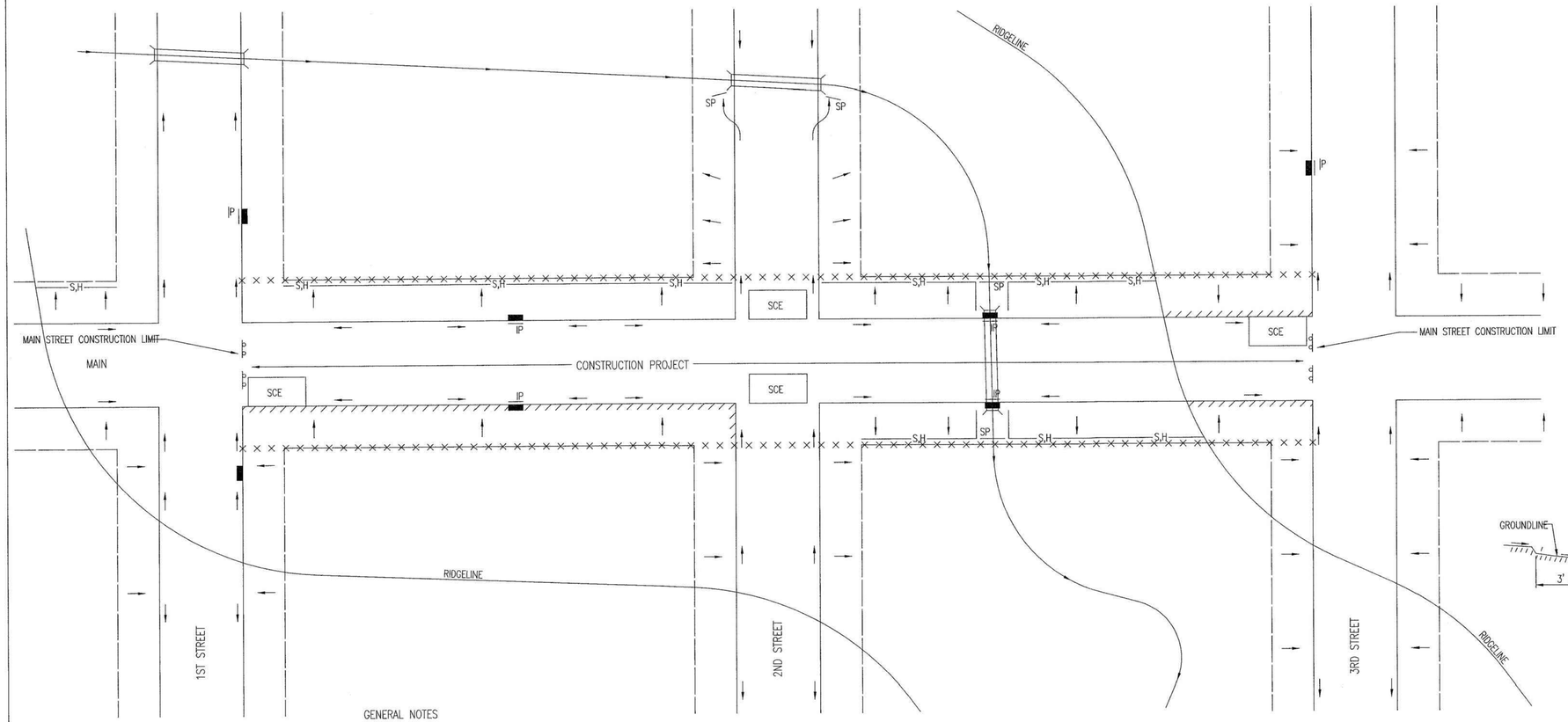
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.

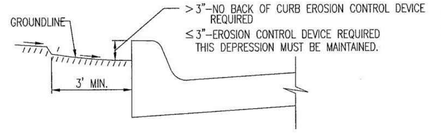
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.

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 — 16294 — KANSAS — PROFESSIONAL ENGINEER — 06/05/15

REVISION: JUNE 2015

CITY OF WICHITA
PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

STREET IMPROVEMENT PROJECTS

CITY ENGINEER
GARY JANZEN, P.E.

PROJECT NUMBER	OCA NUMBER	DATE

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

SHEET

SW-504

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

CITY OF WICHITA

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

Issue:		

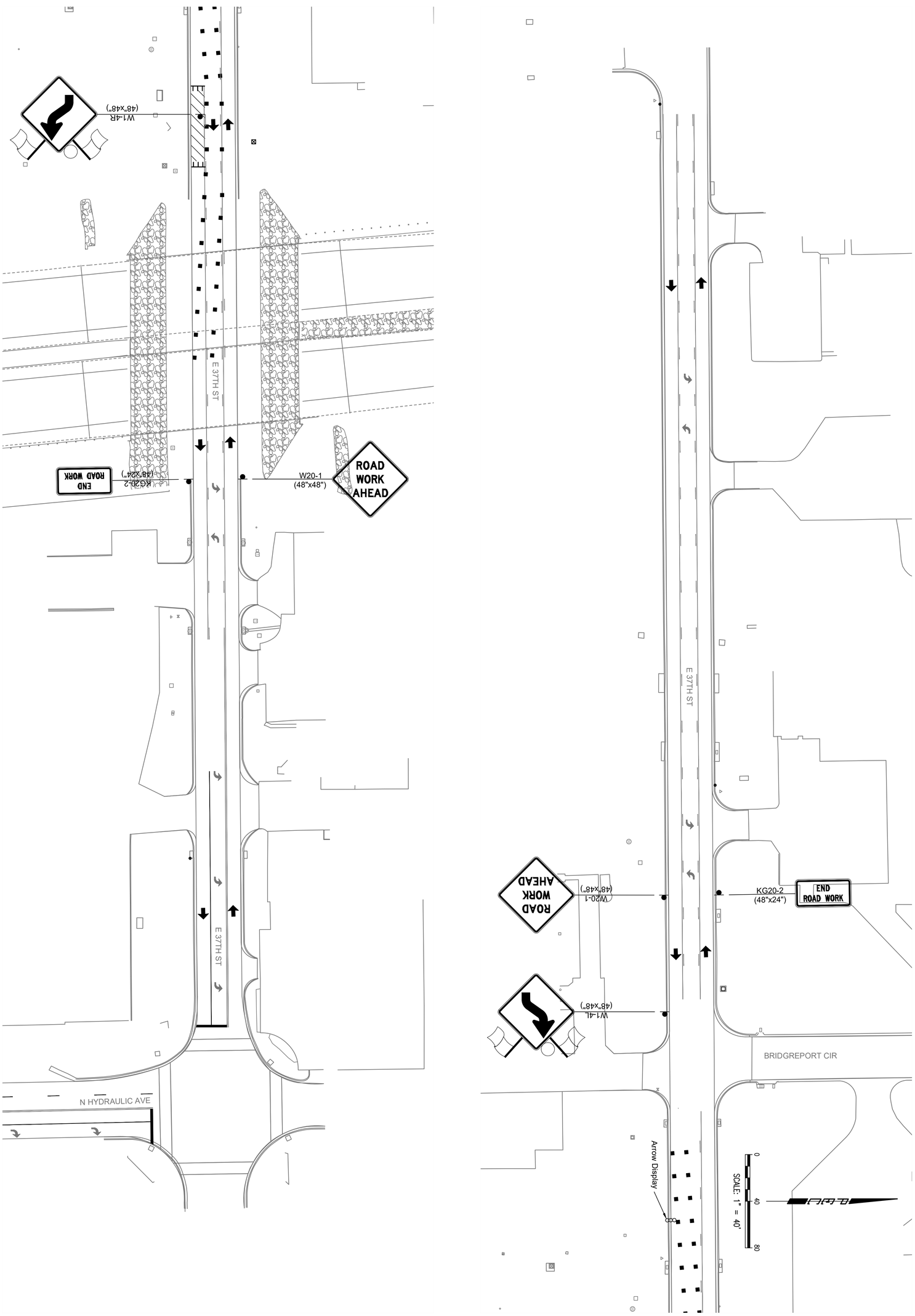
JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	TBK
DRAWN BY	KTD
CHECKED BY	RWG

EROSION CONTROL DETAILS

CU-504

SAVED 11/23/2021 4:35:37 PM BY KURTIS.DEKAT
PLOTTED 9/13/2022 11:26:09 AM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNI\DRAWINGS\210253-000-CU504.DWG

SAVED 5/19/2022 2:57:43 PM BY SCOTT.CANFIELD
PLOTTED 9/13/2022 3:06:18 PM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNI-TRANS\DRAWINGS\210253-000-CT101.DWG



CT101

37TH STREET TRAFFIC CONTROL PLAN

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	SAC
DRAWN BY	DGS
CHECKED BY	SAC

Issues

SANITARY SEWER AND WATERLINE IMPROVEMENTS

TO SERVE

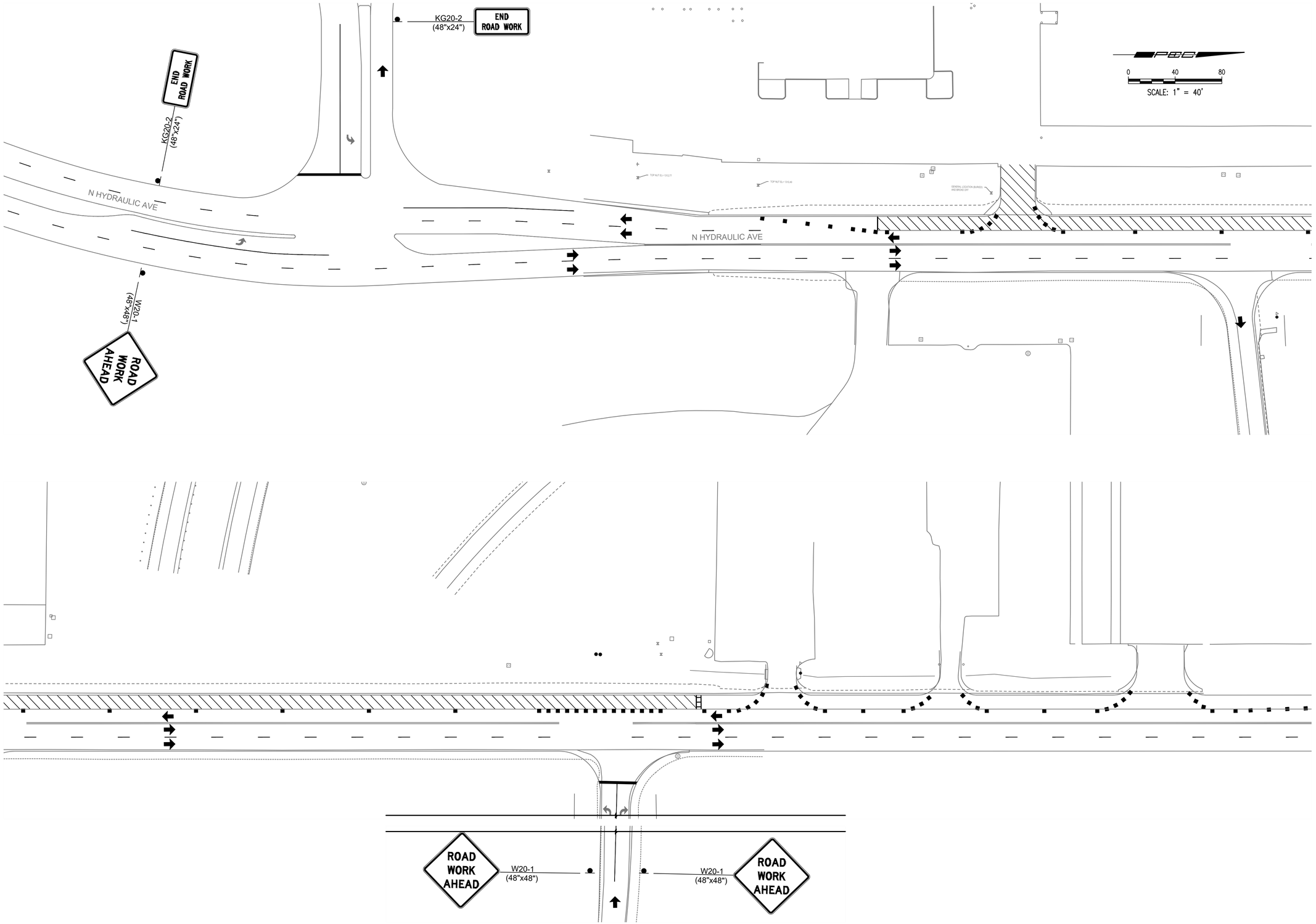
NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

SCOTT ALLAN CANFIELD
LICENSED
14369
PROFESSIONAL ENGINEER
09/13/2022

CITY OF WICHITA

PEC
PROFESSIONAL ENGINEERING CONSULTANTS
300 SOUTH ROCK ISLAND, SUITE 304
WICHITA, KS 67202
316-262-2691 www.pec1.com



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

CITY OF WICHITA

SCOTT ALLAN CANFIELD
LICENSED
14369
09/13/2022
KANSAS
PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS

TO SERVE

NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

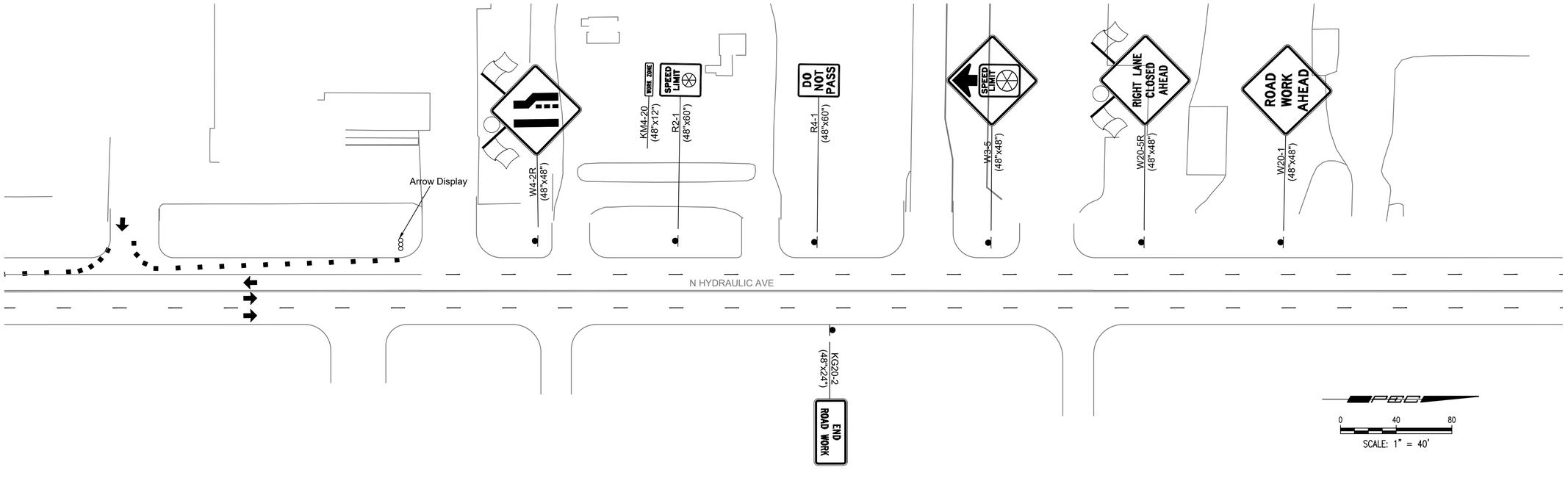
Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	SAC
DRAWN BY	DGS
CHECKED BY	SAC

HYDRAULIC AVE TRAFFIC CONTROL PLAN

CT102

SAVED 9/12/2022 1:55:20 PM BY SCOTT.CANFIELD
PLOTTED 9/13/2022 3:06:28 PM BY KURTIS DEKAT
U:\WICHITA-C\VIL\2021\210253\000\MUNI-TRANS\DRAWINGS\210253-000-CT102.DWG



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

CITY OF WICHITA

SCOTT ALLAN CANFIELD
LICENSED
14369
09/13/2022
KANSAS
PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS

TO SERVE

NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

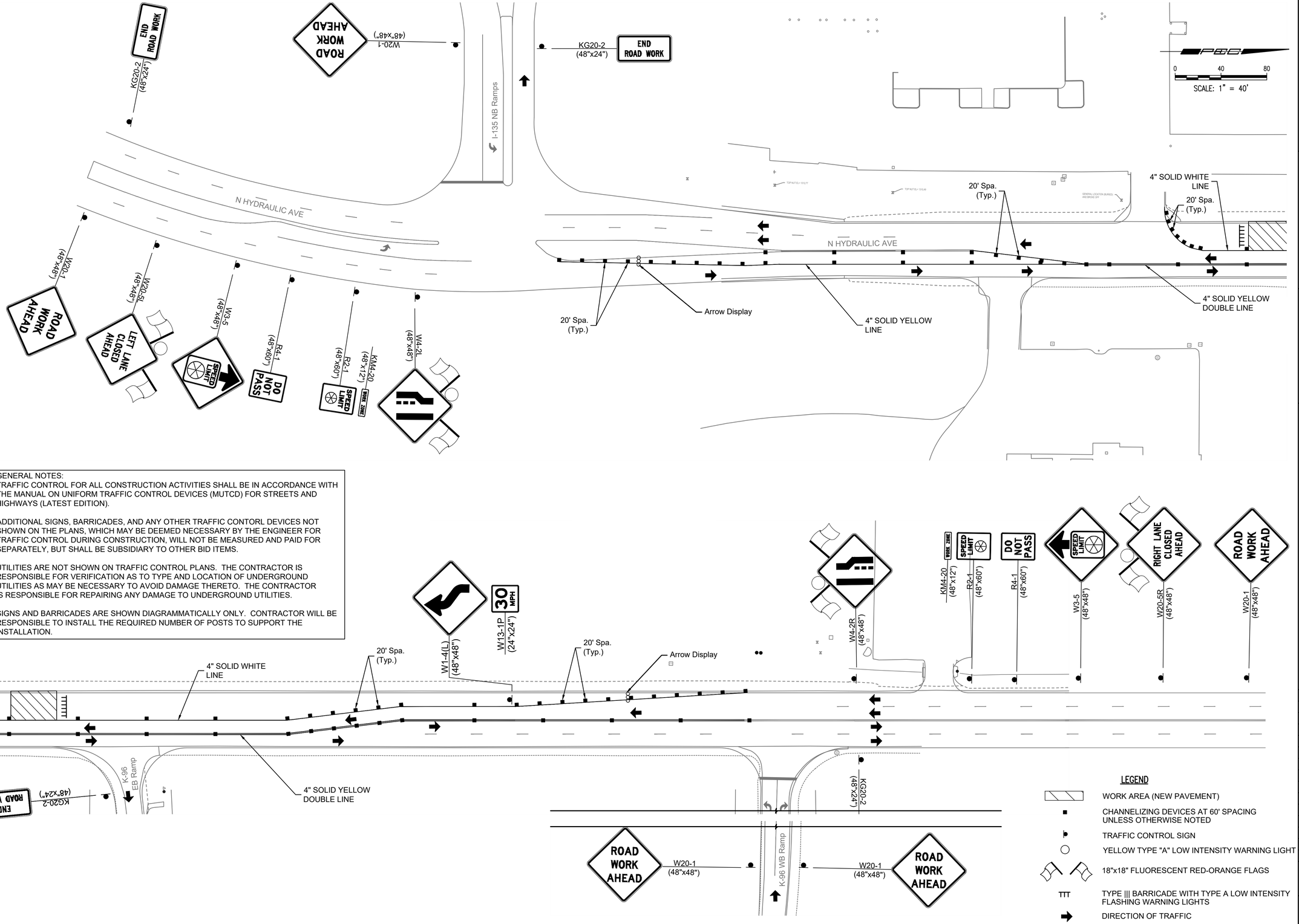
Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	SAC
DRAWN BY	DGS
CHECKED BY	SAC

HYDRAULIC AVE TRAFFIC CONTROL PLAN

CT103

SAVED 9/12/2022 1:53:41 PM BY DYLAN.SHELLENBERGER
PLOTTED 9/13/2022 3:06:36 PM BY KURTIS.DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNI-TRANS\DRAWINGS\210253-000-CT103.DWG



GENERAL NOTES:
TRAFFIC CONTROL FOR ALL CONSTRUCTION ACTIVITIES SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR STREETS AND HIGHWAYS (LATEST EDITION).

ADDITIONAL SIGNS, BARRICADES, AND ANY OTHER TRAFFIC CONTORL DEVICES NOT SHOWN ON THE PLANS, WHICH MAY BE DEEMED NECESSARY BY THE ENGINEER FOR TRAFFIC CONTROL DURING CONSTRUCTION, WILL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT SHALL BE SUBSIDIARY TO OTHER BID ITEMS.

UTILITIES ARE NOT SHOWN ON TRAFFIC CONTROL PLANS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO UNDERGROUND UTILITIES.

SIGNS AND BARRICADES ARE SHOWN DIAGRAMMATICALLY ONLY. CONTRACTOR WILL BE RESPONSIBLE TO INSTALL THE REQUIRED NUMBER OF POSTS TO SUPPORT THE INSTALLATION.

LEGEND

- WORK AREA (NEW PAVEMENT)
- CHANNELIZING DEVICES AT 60' SPACING UNLESS OTHERWISE NOTED
- TRAFFIC CONTROL SIGN
- YELLOW TYPE "A" LOW INTENSITY WARNING LIGHT
- 18"x18" FLUORESCENT RED-ORANGE FLAGS
- TTT TYPE III BARRICADE WITH TYPE A LOW INTENSITY FLASHING WARNING LIGHTS
- DIRECTION OF TRAFFIC

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

CITY OF WICHITA

SCOTT ALLAN CANNEY
LICENSED
14369
09/13/2022
KANSAS
PROFESSIONAL ENGINEER

SANITARY SEWER AND WATERLINE IMPROVEMENTS
TO SERVE
NORTH JUNCTION UTILITY RELOCATION

GARY JANZEN, P.E. - CITY ENGINEER
SS: CITY OF WICHITA PROJ. NO. 468-2021-002929
WL: CITY OF WICHITA PROJ. NO. 448-2021-034139

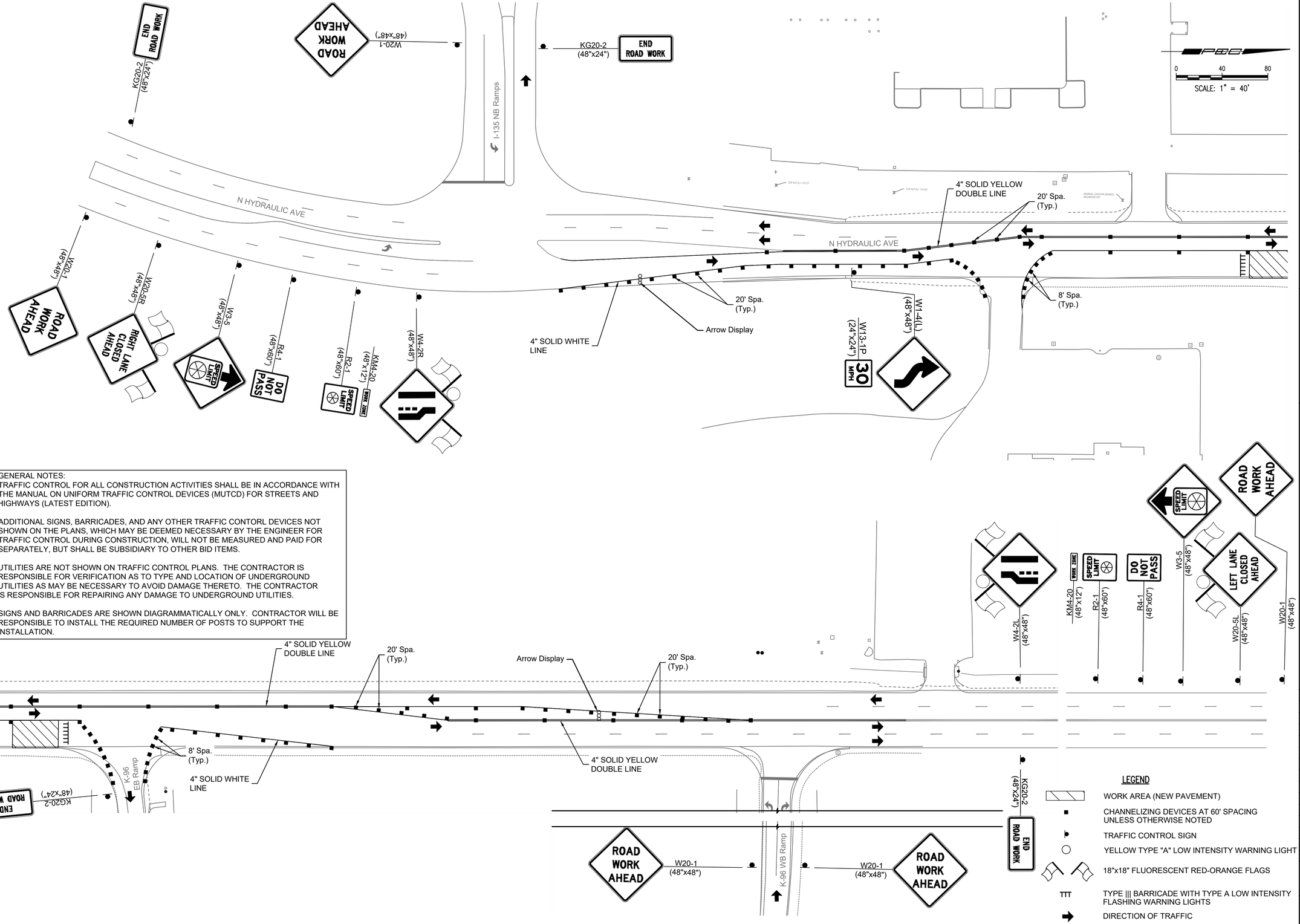
Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	SAC
DRAWN BY	CP
CHECKED BY	SAC

HYDRAULIC AVE TRAFFIC CONTROL PLAN

CT104

SAVED 9/13/2022 2:29:32 PM BY CARLOS PEREZ
PLOTTED 9/13/2022 3:06:43 PM BY KURTIS DEKAT
U:\WICHITA-C\VIL\2021\210253\000\MUNI-TRANS\DRAWINGS\210253-000-CT106.DWG



Issue:		

JOB NO.	35-210253-000-0042
DATE	01 JUNE 2021
PM	TBK
DESIGNED BY	SAC
DRAWN BY	CP
CHECKED BY	SAC

HYDRAULIC AVE TRAFFIC CONTROL PLAN

CT105

SAVED 9/13/2022 2:29:53 PM BY CARLOS PEREZ
PLOTTED 9/13/2022 3:06:53 PM BY KURTIS DEKAT
U:\WICHITA-CIVIL\2021\210253\000\MUNI-TRANS\DRAWINGS\210253-000-CT107.DWG