PRIVATE STORM WATER AND SANITARY SEWER EXTENSIONS

TO SERVE

OAK CREEK OFFICE PARK

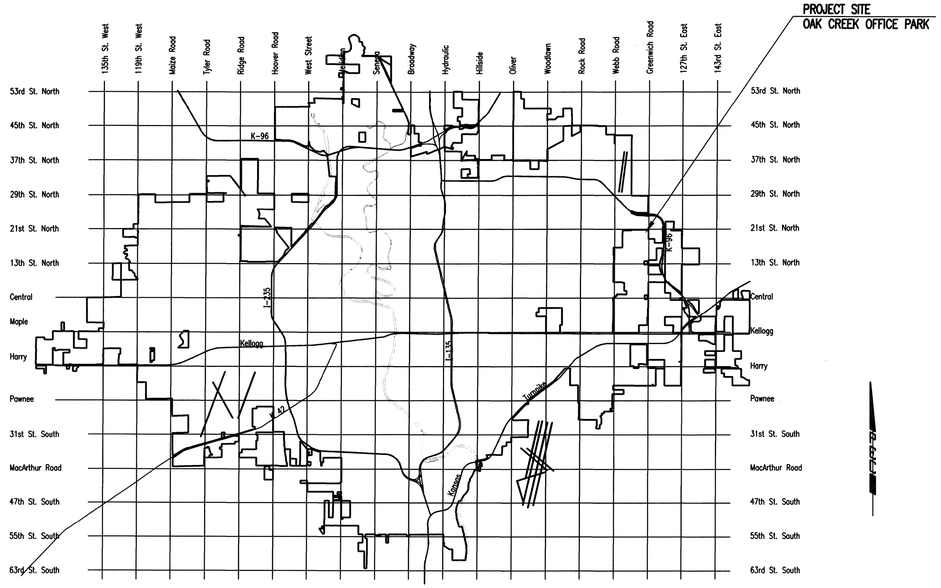
PRIVATE PROJECT NO. 1965 PPS (607861)

CITY OF WICHITA, KANSAS

JAMES L. ARMOUR, P.E. - CITY ENGINEER

STUB & RISERS
RELEASE DATE: 7/6/2011
:APRosas 7/7/2011

AS-BUILT PLANS
CONTRACTOR: NOWAK CONSTRUCTION
INSPECTOR: DEAN WALLACE, C.E.D.
.PDF BY: C.C., 6-27-2011



LOCATION MAP

INDEX OF SHEETS

APPROVED AS NOTED
By CITY ENGINEER OF WICHITA

Sanitary Sewers Julianne Kallman 4-6-09

Storm Sewers Julianne Kallman 4-6-09

Driveway Approaches _____

Paving _____

NOTE TO CONTRACTOR

INSPECTION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM CONTRACTED BY THE OWNER/DEVELOPER. SAID INSPECTION TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR UNTIL SUCH INSPECTION IS ARRANGED FOR AND REQUIRED BONDS HAVE BEEN SUBMITTED TO AND APPROVED BY THE CITY NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER. IMPROVEMENTS PERFORMED UNDER THIS PROJECT SHALL NOT BE ACCEPTED BY THE CITY UNTIL ALL APPLICABLE DOCUMENTATION HAS BEEN SUBMITTED TO THE CITY ENGINEER. THIS MAY INCLUDE: RECORD DRAWINGS, INSPECTION LOGS, TEST DOCUMENTATION, TV TAPES, AND A CERTIFICATE OF COMPLETION. THE ABOVE SHALL BE PERFORMED BY THE CONSULTING FIRM CONTRACTED TO INSPECT THIS PROJECT.

MARCH 2009

PLANS PREPARED BY

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS

WICHITA, KANSAS

MICHAEL D. KELSEY
LICENSED
13944
4/3/09
KANSAS
PROFESSIONAL ENGINEER

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AS-BUILT PLANS
CONTRACTOR: NOWAK CONSTRUCTION
INSPECTOR: DEAN WALLACE, C.E.D.
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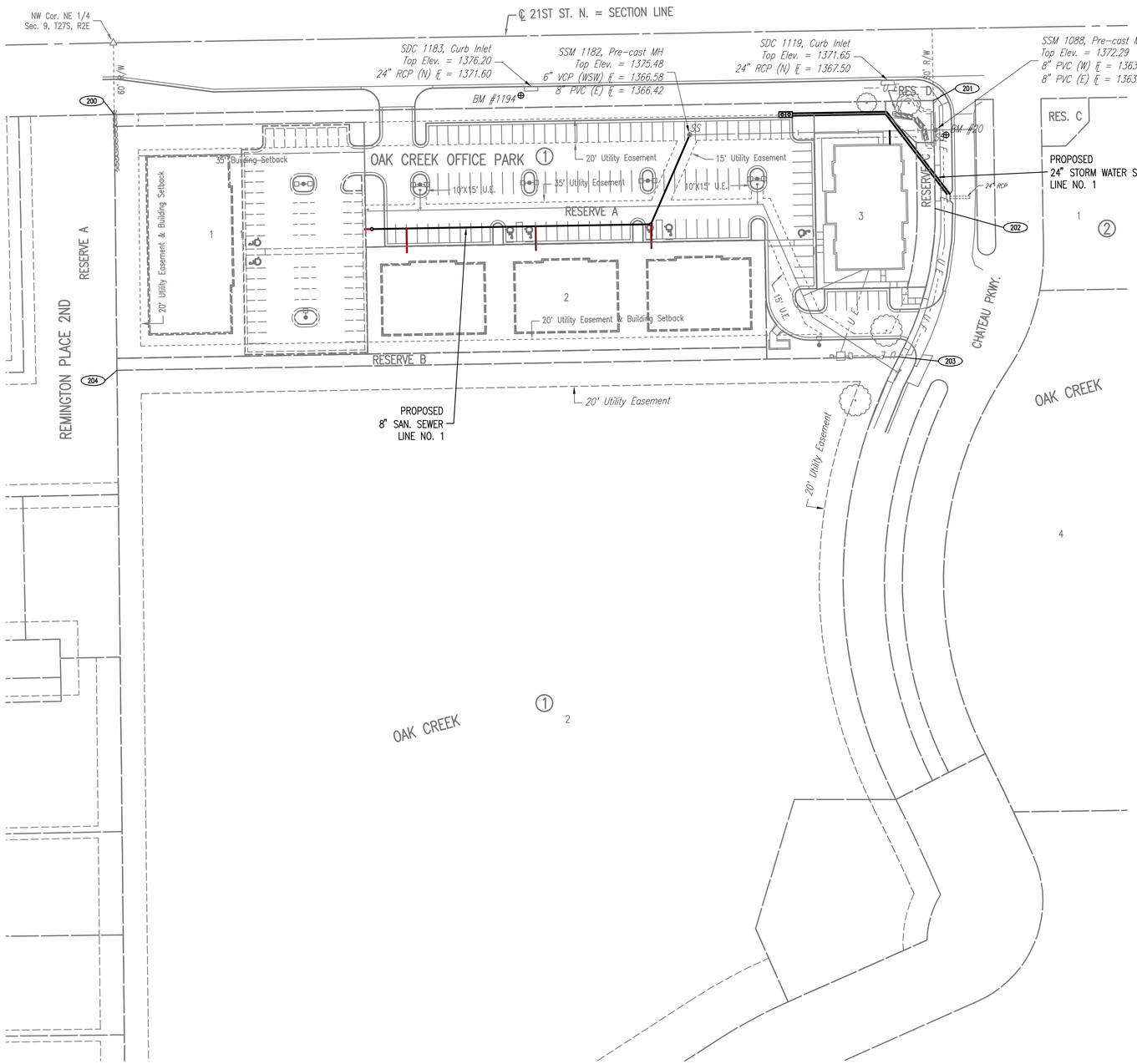

SCALE: 1" = 50'

BENCHMARKS ⊕ BM #999

BM #20
CHISELED "d" ON E. SIDE CONCRETE BASE FOR LIGHT POLE AT SW. CORNER OF 21ST ST. N. & CHATEAU PARKWAY.

ELEV. 1372.59 NGVD 29

BM #1194
60D STEP NAILS ON S. SIDE POWER POLE ON S. SIDE OF 21ST ST. N., 300'+/- W. OF CHATEAU PARKWAY.

ELEV. 1378.24 NGVD 29

CONTROL POINTS		
POINT	NORTH	EAST
200	387191.0795	2371434.5472
201	387202.8282	2372119.6876
202	387112.3936	2372121.2383
203	386988.2945	2372090.7106
204	386977.0830	2371436.8986

GENERAL NOTES

1. ALL CONSTRUCTION AND MATERIALS TO COMPLY WITH CITY OF WICHITA SPECIFICATIONS AND STANDARDS.
2. ALL ELEVATIONS SHOWN ARE NGVD 29 DATUM.
3. THE CONTRACTOR SHALL LIMIT THE EXTENT OF TRENCH TO REMAIN OPEN OVERNIGHT AND WEEKENDS TO LESS THAN 50 FEET.
4. AT LEAST 72 HOURS PRIOR TO BEGINNING EXCAVATION (EXCLUDING WEEKENDS AND HOLIDAYS), THE CONTRACTOR SHALL CONTACT THE KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE LOCAL UTILITY COMPANIES MARK ANY EXISTING LINES WITHIN THE PROJECT AREA.
5. UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR OR UNLESS THE PLANS SPECIFICALLY IDENTIFY A UTILITY TO BE ADJUSTED BY ITS OWNER DURING CONSTRUCTION. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR THE DESIGN. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.
7. 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 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.
8. THE CONTRACTOR SHALL AVOID REMOVAL OR TRIMMING OF ANY TREES OR SHRUBS WHERE POSSIBLE. WHERE THE CONTRACTOR BELIEVES THE REMOVAL OR TRIMMING IS UNAVOIDABLE, HE SHALL COORDINATE SUCH WORK WITH THE ENGINEER. COSTS FOR TREE/SHRUB REMOVAL AND TRIMMING REGARDLESS OF SIZE SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.
9. THE CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
10. INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL BUSINESS OR RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS. THE CONTRACTOR SHALL UTILIZE BARRICADES, SIGNS, GUARDS, AND FLAGMEN IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
11. THE CONTRACTOR SHALL INSTALL AND/OR MAINTAIN EROSION CONTROL METHODS AS SPECIFIED ON SHEET C1.11. THE FOLLOWING QUANTITIES ARE ESTIMATED, AND SHOULD BE CONSIDERED THE MINIMUM EFFORT REQUIRED. THE GENERAL LOCATION OF THE REQUIRED EROSION CONTROL IS ILLUSTRATED ON THE PROJECT STORM WATER POLLUTION PREVENTION PLAN. THE SANITARY SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL SHOWN THROUGH THE COMPLETION OF THIS PROJECT. INSTALLATION OF THESE BMP'S DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF ABATING SOIL EROSION.

No.	Revision	By	Date

OAK CREEK OFFICE PARK
PRIVATE STORM WATER AND SANITARY SEWER EXTENSIONS

KEY MAP & GENERAL NOTES

JAMES L. ARMOUR, P.E. – CITY ENGINEER
CITY OF WICHITA PRIVATE PROJECT NO. 1965 PPS (607861)

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Designed by	IDK	Job No.	36-08758-5526
Drawn by	AEE	Date	MARCH 2009

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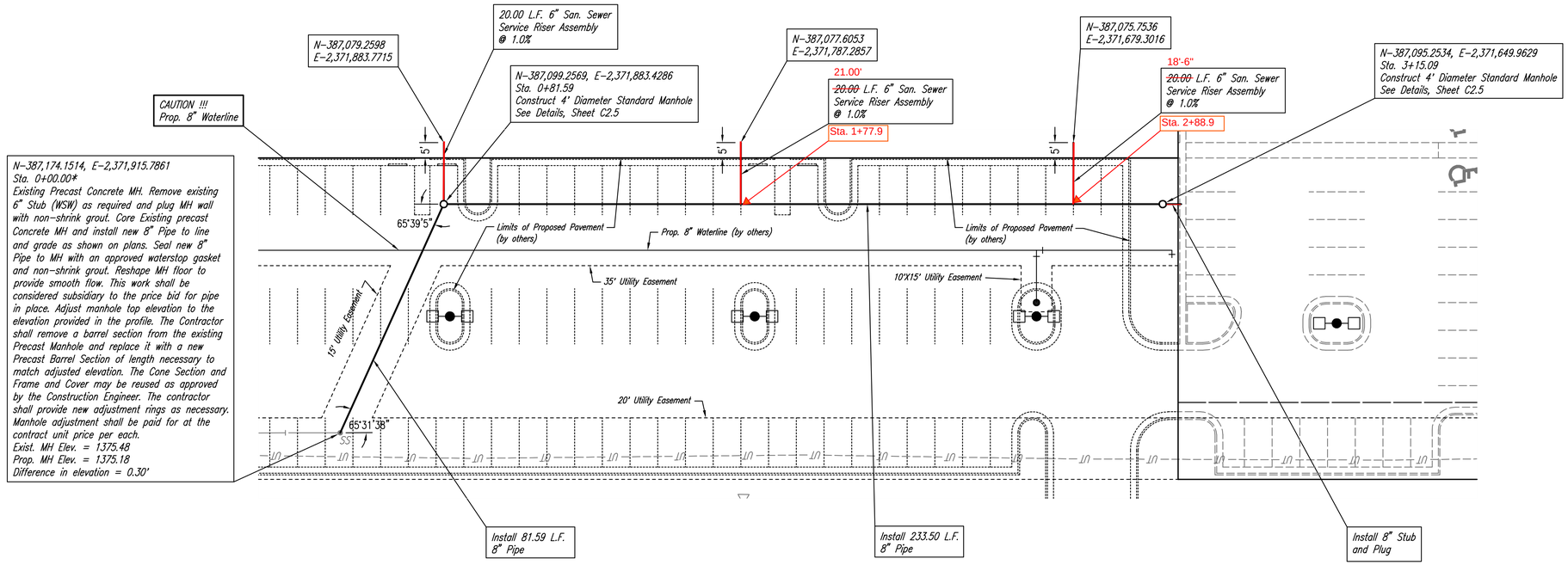


* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 8" PVC PIPE AT SANITARY SEWER STATION 0+00.00 TO VERIFY ITS HORIZONTAL AND VERTICAL LOCATION. THE PIPE LOCATION SHALL BE REPORTED TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

SCALE:

PLAN: LAT. & LONG. 0 20 40

PROFILE: HORIZ. SAME AS ABOVE

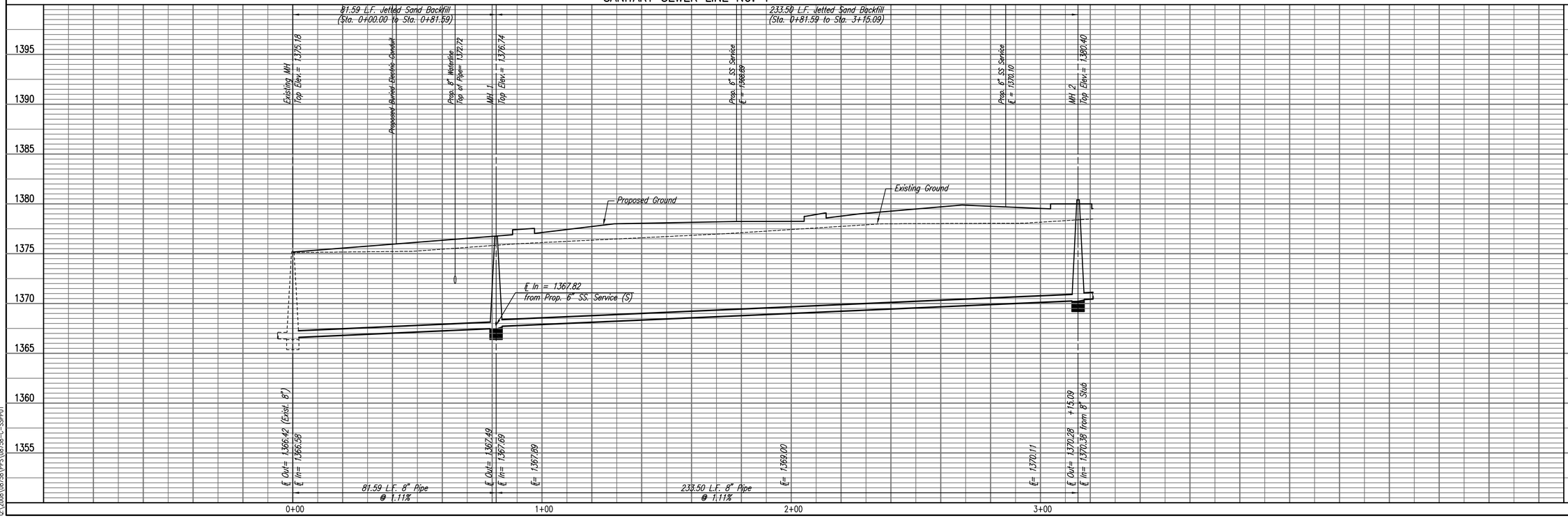
VERT. 0 5

AS-BUILT PLANS
CONTRACTOR: NOWAK CONSTRUCTION
INSPECTOR: DEAN WALLACE, C.E.D.
.PDF BY: C.C., 6-27-2011

PLAN | CHECKED | CHECKED | BY | DATE

PROFILE | CHECKED | CHECKED

SANITARY SEWER LINE NO. 1



OAK CREE OFFICE PARK
PRIVATE STORM WATER AND SANITARY SEWER EXTENSIONS

SS LINE NO. 1

JAMES L. ARMOUR, P.E. – CITY ENGINEER
CITY OF WICHITA, PRIVATE PROJECT NO. 1965 PPS (607861)

Professional Engineering Consultants, P.A.
303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Job No. 36–08758–5526
Date MARCH 2009
Designed By IDK
Drawn By AEE
Sheet C2.3

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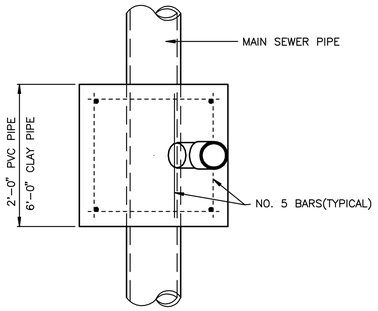
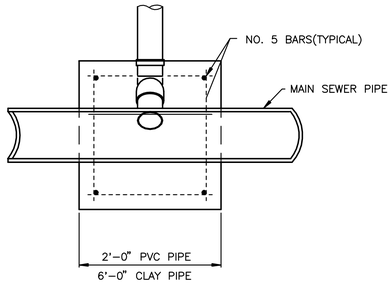
VERTICAL RISER DETAILS

ADOPTED AS STANDARD DESIGN
BY
CITY OF WICHITA, KANSAS
OCTOBER 1992

AS-BUILT PLANS
CONTRACTOR: NOWAK CONSTRUCTION
INSPECTOR: DEAN WALLACE, C.E.D.
.PDF BY: C.C., 6-27-2011



TYPICAL PLAN VIEW

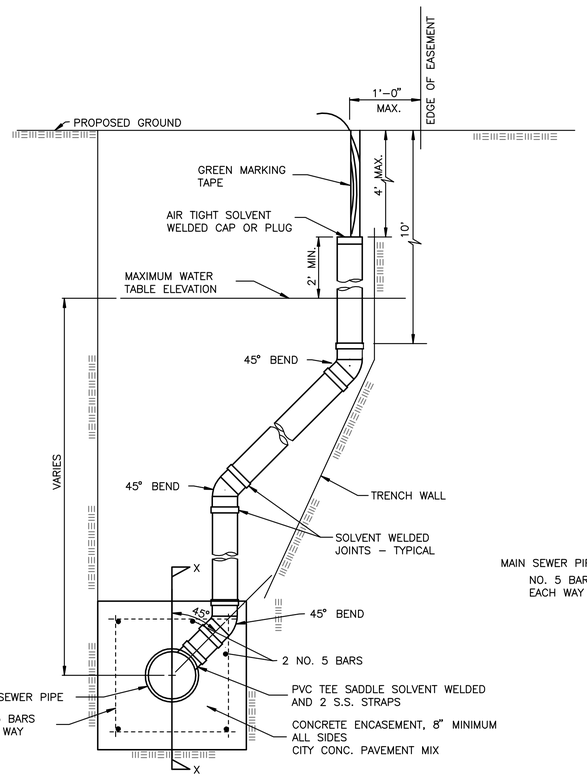


TYPICAL SECTION X-X

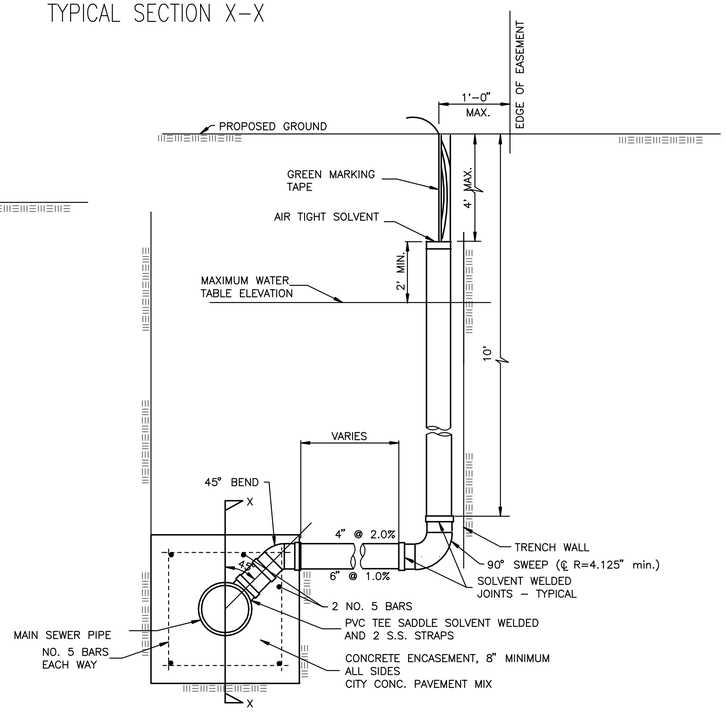
SEWER SERVICE TABLE									
NO.	SIZE	LOCATION				FOR INFORMATION ONLY		RECORD INFORMATION (TO BE COMPLETED BY PROJECT INSPECTOR)		NO.
		LOT NO.	BLOCK NO.	LINE NO.	STATION/ DIRECTION	APPROXIMATE LENGTH 4" or 6" PIPE VERTICAL	APPROXIMATE LENGTH 4" or 6" PIPE HORIZONTAL	DISTANCE FROM NEAREST MANHOLE UPSTREAM	DISTANCE FROM NEAREST MANHOLE DOWNSTREAM	
1	6" Stub Riser Pipe Assembly	2	1	1	0+81.59/Lt.	4'-9"	20'	233.50'	at MH	1
2	8"x6" Riser Pipe Assembly	2	1	1	~~1+78.09~~ 1+77.90/Lt.	5'-6"	20'	137.19'	96.31'	2
3	8"x6" Riser Pipe Assembly	2	1	1	~~2+86.09~~ 2+88.90/Lt.	5'-9"	20'	26.19'	207.31'	3

NOTES:

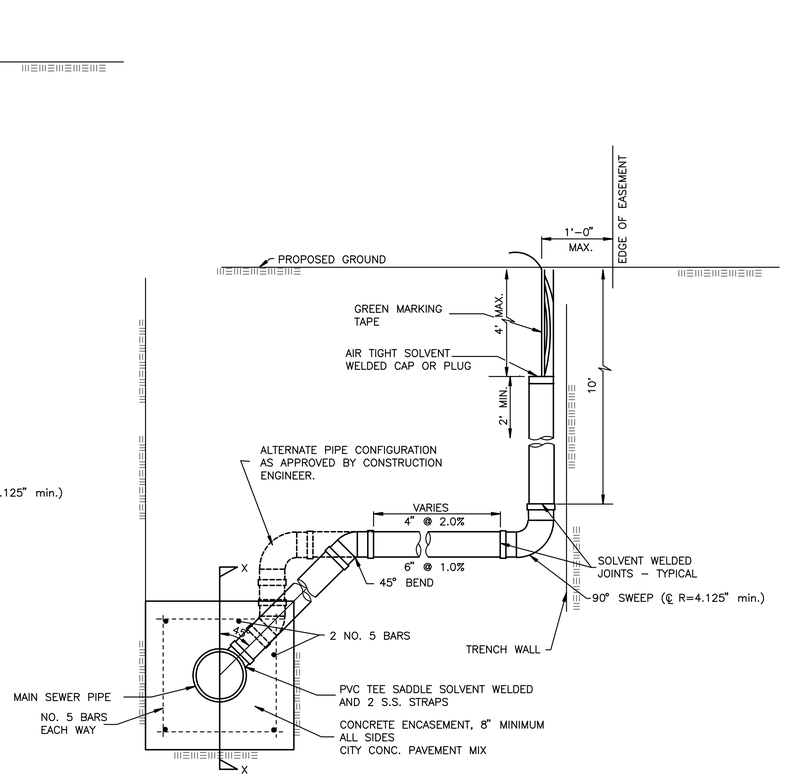
1. Vertical Riser Pipe shall be extended to 2' minimum above ground water elevation and 4' maximum below proposed ground elevation.



METHOD "A"



METHOD "B"



METHOD "C"

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

GENERAL NOTES

1. RISERS. Risers shall be installed to serve all lots or tracts where the sanitary sewer main is below the water table. Risers shall also be installed to serve all lots and tracts where the sanitary sewer main depth is greater than 12 feet below the proposed ground elevation. Installation of risers because of field conditions shall be as approved by the Construction Engineer. The location of the risers to serve developed property shall be approved by the property owner and the Construction Engineer.

2. PIPE STUBS. Pipe stubs shall 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 pipe stub and the flowline of the sanitary sewer main out of the manhole shall not exceed 2 feet. Risers shall be utilized at manhole pipe stubs as indicated in Note 1. Manhole pipe stubs shall be set such that the top of the stub is not lower than the top of the sanitary sewer main.

3. SIZING. Pipe stubs and risers shall be sized according to the plans and riser table where risers are indicated by the plans. Where risers or pipe stubs are required because of field conditions, the risers and stubs shall be six-inch 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 and stubs shall be approved by the Construction Engineer prior to installation.

4. RISER OR STUB MATERIAL. Risers and stubs shall be constructed of Schedule 40 PVC Pipe, meeting the requirements of the latest revision of A.S.T.M. . All pipe joints shall be solvent welded.

5. REINFORCED CONCRETE ENCASEMENT. Riser connections to clay pipe sanitary sewers shall be reinforced concrete encased both ways from the riser centerline. The reinforced concrete 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 reinforced concrete encased one foot each way from the riser centerline. The concrete encasement shall be reinforced using reinforcing steel as shown in the appropriate drawing. The concrete shall conform to the City Standard Specifications for concrete pavement.

6. BEDDING. 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 backfilling the riser pipe 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 the proposed ground surface. If ground water is encountered, the top of the riser pipe shall be set at an elevation two feet (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 fastening green colored plastic tape to the end of the riser. The tape shall be supported by a length of wooden 2 x 4, extending from the top of the riser pipe to the proposed ground surface. The green tape shall be visible and extend one foot above the proposed 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, indicating the direction from the manhole, the direction and distance from the main, riser size, and elevation of the top of the riser.

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. "Sanitary sewer risers" shall be paid for at the contract unit price per each, which price shall be full compensation for all pipe, fittings, marking tape, length of wooden 2 x 4, reinforced concrete encasement, support during backfill, backfill, labor, site restoration, and any other items necessary to complete the work.

"Manhole stubs" 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, reinforced concrete encasement, and all other items as required and listed for "Sanitary Sewer Risers".

REVISED NOTE 4 – APRIL 98

THE CITY OF WICHITA
CITY ENGINEER'S OFFICE
CITY HALL – SEVENTH FLOOR
455 NORTH MAIN STREET
WICHITA, KANSAS 67202
(316) 268-4501
(316) 268-4114 FAX

VERTICAL RISER DETAIL

JAMES L. ARMOUR, P.E. – CITY ENGINEER

PROJECT NUMBER 1965 PPS (607861)

DATE MAR. 2009

SHEET C2.9

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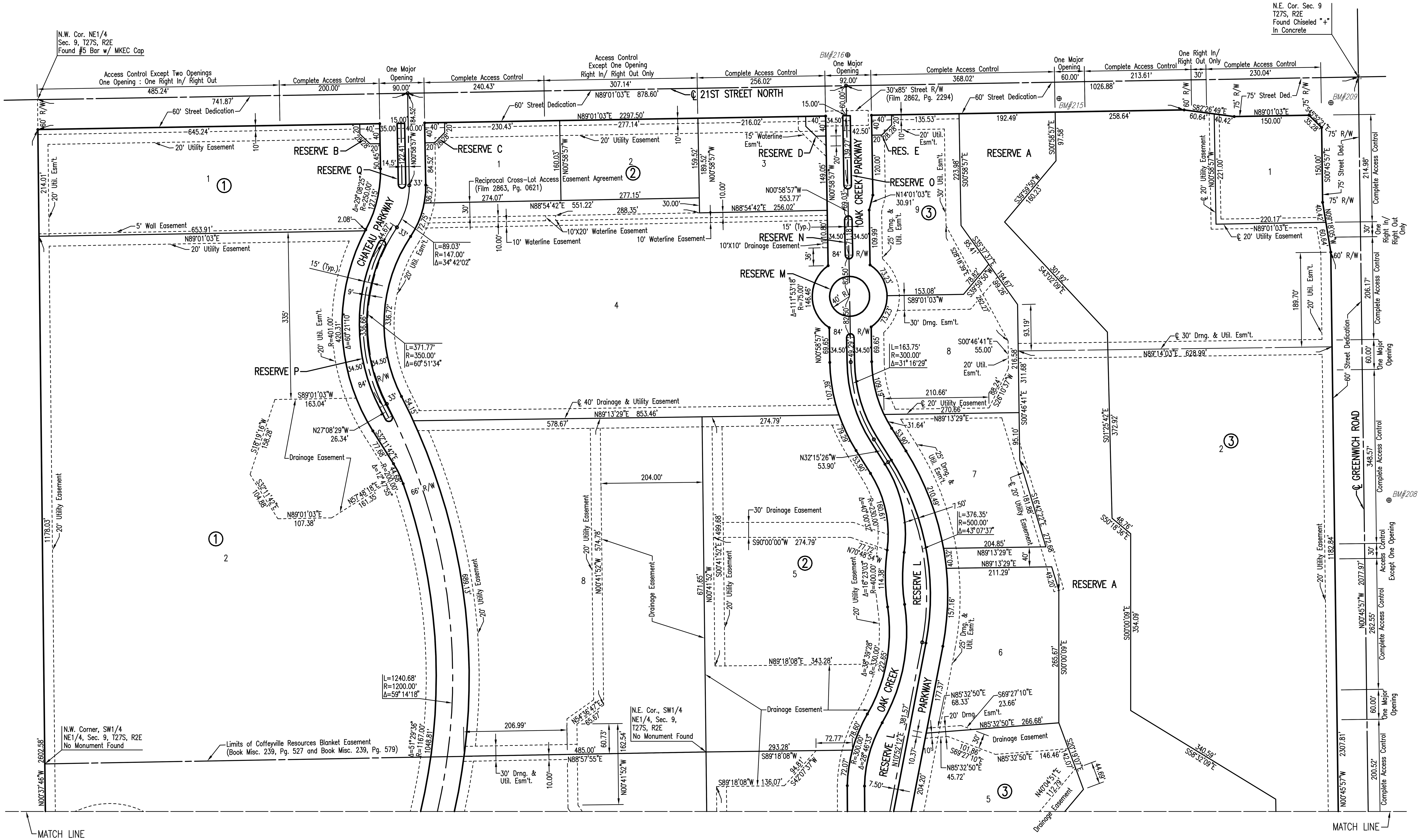
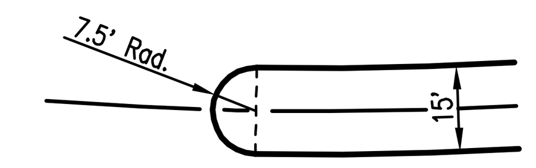
OAK CREEK

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

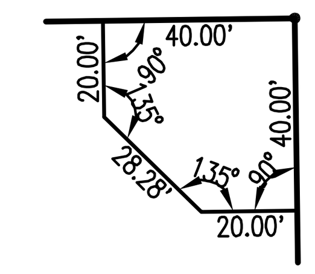


SCALE: 1" = 100'

● = 1/2" REBAR W/PEC CAP UNLESS OTHERWISE NOTED
○ = NO MONUMENT SET



TYPICAL MEDIAN RESERVE DETAIL



TYPICAL ENTRY MONUMENT RESERVE DETAIL

BENCHMARKS:

BM #205 (Datum)
COW brass disc in NW corner of railroad signal base, W side of Greenwich Road, 1/2 mile S of 21st Street North.
Elev. = 1370.59 N.G.V.D.
183.19 City Datum

BM #206
'T' Post 5' W of N gate post to field entrance, W side of Greenwich Road, 700' ± N of railroad tracks and 500' ± S of RCB culvert.
Elev. = 1365.87 N.G.V.D.
178.47 City Datum

BM #207
Chiseled "□" on top of concrete headwall on NW corner of RCB under Greenwich Road, 1100' ± S of 21st Street North.
Elev. = 1360.065 N.G.V.D.
172.665 City Datum

BM #208
Railroad spike in W face of 20" Elm on E right of way line of Greenwich Road 800' ± S of 21st Street North.
Elev. = 1367.70 N.G.V.D.
180.30 City Datum

BM #209
Chiseled "□" on NW corner of traffic signal base, at SW corner of Greenwich Road & 21st Street North
Elev. = 1363.54 N.G.V.D.
176.14 City Datum

BM #215
Chiseled "+" in top center curb inlet 600' W of Greenwich Road on S side of 21st Street North.
Elev. = 1363.265 N.G.V.D.
175.865 City Datum

BM #216
Chiseled "□" on S end of curb & gutter at ℄ of Median, Target entrance on N side of 21st Street North 1400' ± W of Greenwich Road.
Elev. = 1364.55 N.G.V.D.
177.15 City Datum

AS-BUILT PLANS
CONTRACTOR: NOWAK CONSTRUCTION
INSPECTOR: DEAN WALLACE, C.E.D.
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PLAT

JAMES L. ARMOUR, P.E. – CITY ENGINEER
CITY OF WICHITA PRIVATE PROJECT NO. 1965 PPS (607861)

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303 S. TOPEKA • WICHITA, KANSAS 67202
316-262-2691 • FAX 316-262-3003

Designed by	IDK	Job No.	36–08758–5526	Sheet	C5.1
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by AEE