STORM WATER DRAIN

to serve

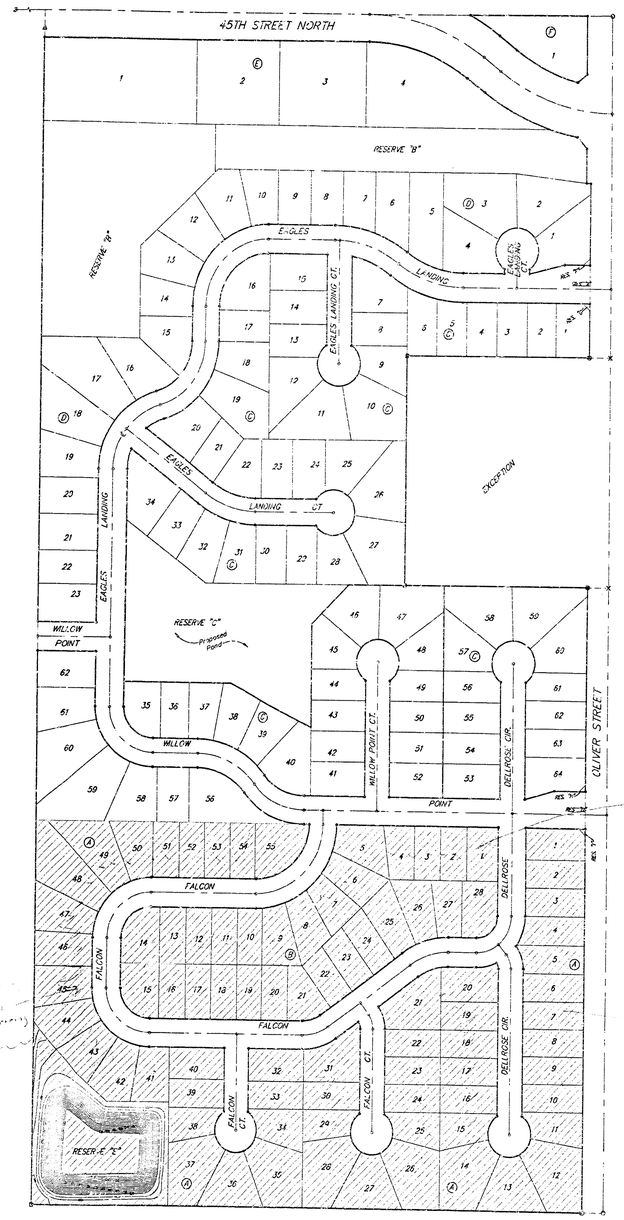
EAGLES LANDING AT NORTH OLIVER 2ND

CITY OF WICHITA, KANSAS

Neil Cable, P.E. City Engineer

Project Number

1313 PPS (607861)



Scale: 1" = 150'

Sheet Index

Title Sheet	1
Pond Plan	2
Soil Erosion BMP's	3
Mass Grading Plan	4
Pond Cross Sections	5-5
Copy of Plat	7

Benchmark

Oliver and 45th St. N. – Top of Brass Plate on SW Corner of R.C.B.C. East of Intersection. ELEV. = 1398.88 NGVD (211.48 City Datum)

60d Nail in H.L.P., 33' S. of the NW Corner of Gov't. Lot 1 in the NE1/4 of Sec. 26, TWP. 26-S, R-1-E of the 6th P.M. Elev. = 1377.19 NGVD (189.79 City Datum)

Benefit District:

GENERAL NOTES:

1. Contractor will be required to provide notice to utility companies a minimum of twenty-four (24) hours prior to any excavation, as follows:

   Kansas One-Call 687-2470

   The Contractor must notify the following in case of an emergency:

Cox Communications, Inc.	262-0661
Kansas Gas Service Company	383-0600
Wester Energy	383-8500
Peoples Gas Company	942-8350
Southwestern Bell Telephone Company	1-571-2611
City of Wichita Water Dept.	265-4908
City of Wichita Traffic Engineering	269-4446

2. Underground utility service lines and overhead utility pole lines are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

3. 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.

4. 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.

6. All areas disturbed by construction at the proposed pond shall be seeded, fertilized, and mulched as shown on the Pond Plan.

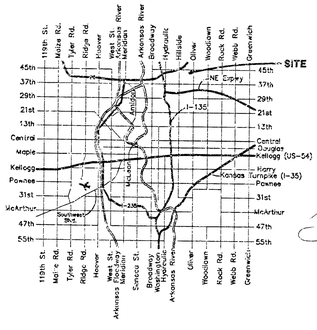
8. Contractor shall verify earthwork quantities prior to bidding project. Excess material shall be stockpiled in a location to be determined by the Engineer.

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA

Storm Water Drain VRH 2/4/03

NOTE TO CONTRACTORS

Inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection nor shall any work be commenced without written authorization by the City Engineer. All Construction and Materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).



Vicinity Map

BOOKED
9/29/03
E-5
ROL

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

BENCHMARK:
OLIVER AND 45TH ST. N. -- TOP OF BRASS PLATE ON SW CORNER OF R.C.B.C. EAST OF INTERSECTION.
ELEV. = 1398.88 NGVD (211.48 CITY DATUM)

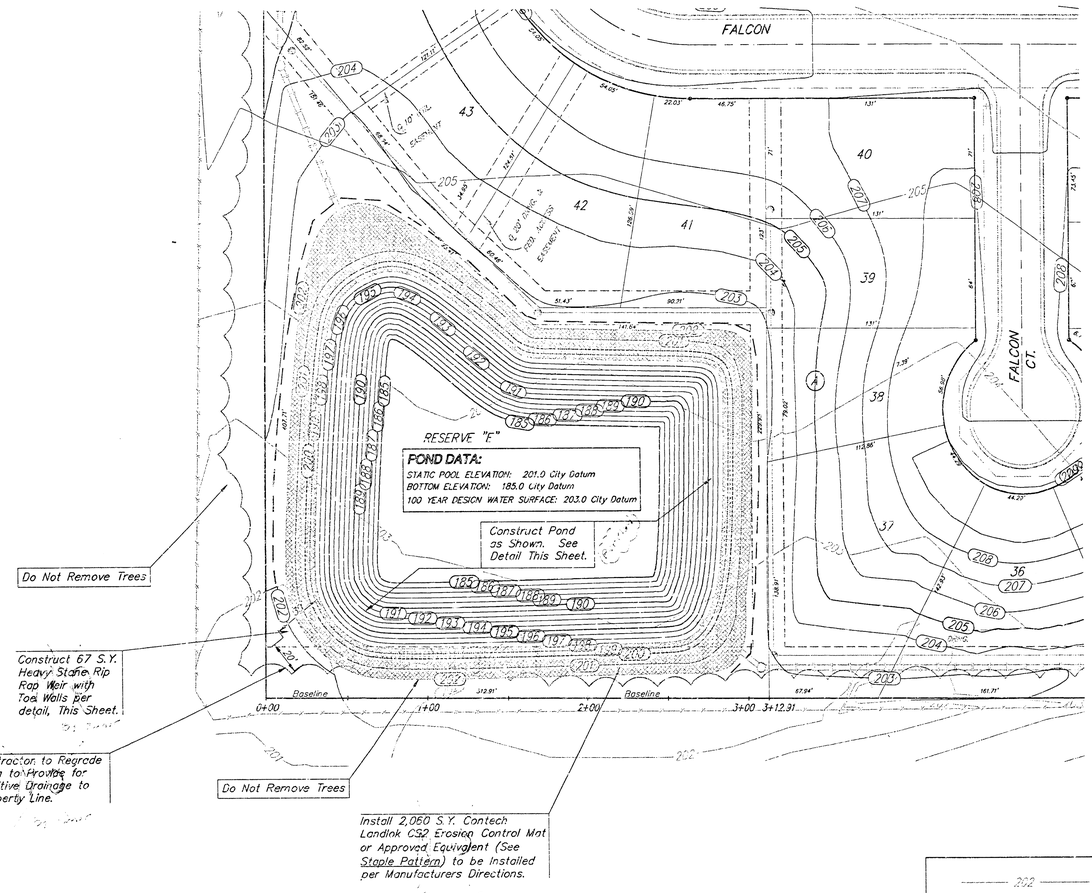
60d NAIL IN H.L.P., 33' S. OF THE NW CORNER OF GOV'T. LOT 1 IN THE NE1/4 OF SEC. 26, TWP. 26-S, R-1-E OF THE 6TH P.M.
ELEV. = 1377.19 NGVD (189.79 CITY DATUM)

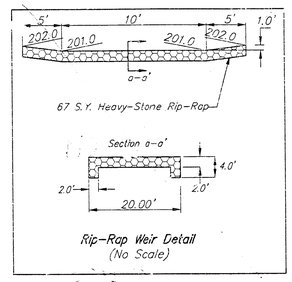
EARTH WORK TOTALS

	C.Y. Fill	C.Y. Cut
Mass Grading	33,663	4,540
Pond Construction	0	27,185
Total Earthwork	33,663	31,725

Earthwork quantities do not include correction factors and are for reference only. All cost associated with mass grading shall be included in the bid item "Mass Grading".

SCALE: 1" = 40'
• = Iron



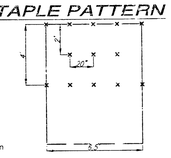


STAPLE PATTERN

STAPLE PATTERN "D"

3-1/2 staples per sq. yd. using 6-inch, 11 ga. wire "U" staples. 8-inch staples and longer may be used for loose soils. 9 ga. staples or heavier may be necessary in hard or rocky soils.

Contractor shall follow manufacturers installation instructions regarding overlap dimensions. The overlap shall have a minimum dimension of three inches (3").

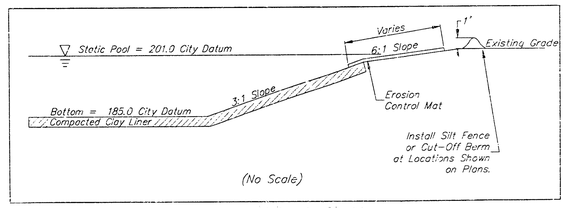


Erosion control mat.

NOTES:

1. POND BOTTOM AND SIDESLOPES BELOW STATIC POOL ELEVATION SHALL BE OVER-EXCAVATED 1' AND A 1' CLAY LINER SHALL BE COMPACTED TO 95% STD. DENSITY. THE PLASTICITY INDEX (P.I.) SHALL BE AT LEAST 27. THE COMPACTION AND P.I. SHALL BE VERIFIED DURING CONSTRUCTION BY THE CONTRACTOR.
2. CONTRACTOR RESPONSIBLE FOR SECURING EFFECTIVE COMPACTED CLAY LAYER ZONE AT AT A MINIMUM OF 12" THICK INCLUDING ANY NECESSARY OVER EXCAVATION OF BOTTOM AND SIDE SLOPES TO ENSURE A NON-PENETRABLE LINER.
3. ANY EXCESS EXCAVATION SHALL BE STORED ON-SITE AT LOCATIONS TO BE DETERMINED BY THE ENGINEER.
4. ALL OF RESERVE "E" ABOVE THE STATIC WATER SURFACE SHALL BE SEEDED AND MULCHED AS FOLLOWS: (PERMANENT SEEDING)
   SEED -- KANSAS PREMIUM FESCUE BLEND; 8#/1000 SQ. FT.
   MULCH -- 2 TONS PRAIRIE HAY / ACRE
   FERTILIZER -- 12-24-12 RATIO AT 350 LBS./AC.

   ALL OTHER DISTURBED AREAS NOT COVERED BY PAVEMENT ARE TO BE SEEDED AND MULCHED AS FOLLOWS: (TEMPORARY SEEDING)
   SEED -- RYE GRASS (PLS)--5#/1000 SQ. FT.
6. INSTALL EROSION CONTROL MAT FROM 3' BELOW THE WATER SURFACE TO ELEV = 202.00.

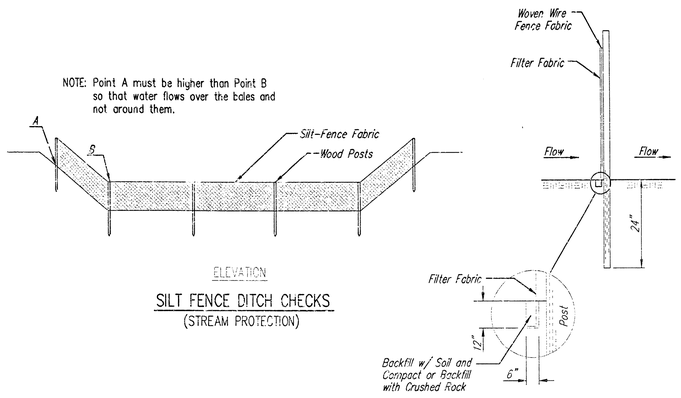


202 ——— Existing Contour
(202) ——— Proposed Contour
— — — — — — Silt Fence or Cut-Off Berm

EAGLES LANDING AT NORTH OLIVER 2ND
POND PLAN
WICHITA, KANSAS, SEDWICK, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER				SHEET 2 OF 7
DESIGN BLP	DRAWN AEC	APPROVED	DATE 2/03	SCALE NOTED



ELEVATION

SILT FENCE DITCH CHECKS
(STREAM PROTECTION)

ANCHOR TRENCH DETAIL

Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification.
The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
Silt fence fabric should be attached to the wooden posts with staples, wire, zip ties, or nails.

Placement:

Place silt fence in ditches where it is unlikely that it will be overtopped.
Water should flow through a silt fence ditch check, not over it. Silt fence ditch checks often fail when overtopped.
Silt fence ditch checks should be placed perpendicular to the flowline of the ditch.
The silt fence should extend far enough so that the ground level at the ends of the fence is higher than the top of the low point of the fence. This prevents water from flowing around the check.
Checks should not be placed in ditches where high flows are expected. Rock checks should be used instead.
Silt fence should be placed in ditches with slopes of 6% or less. For slopes steeper than 6%, rock checks should be used.

The following table provides check spacing for a given ditch grade:

Ditch Check Ditch grade (%)	Spacing Check Spacing (feet)
0.5	200
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	30

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:

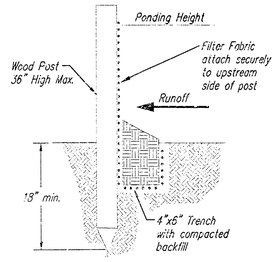
Does water flow around the ditch check?
Does water flow under the ditch check?
Does the silt fence sag excessively?
Has the silt fence torn or become detached from the posts?
Does sediment need to be removed from behind the ditch check?

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.



SILT FENCE BARRIERS

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.

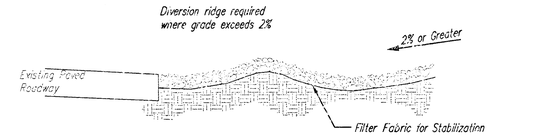
List of common placement/installation mistakes to avoid:

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.

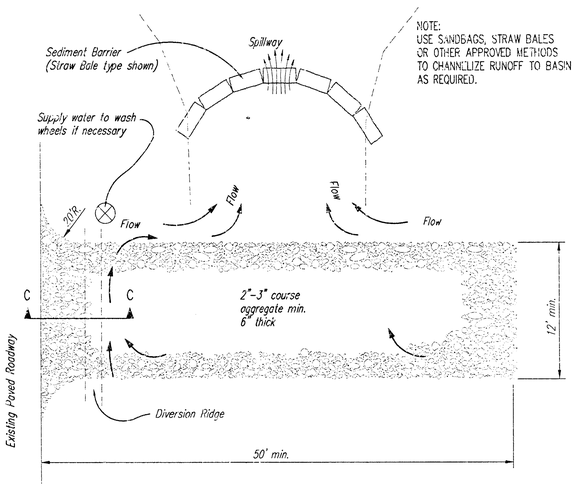
Inspection and Maintenance:

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?



SECTION C-C



STABILIZED CONSTRUCTION ENTRANCE

NOTES:

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

CITY OF WICHITA

SOIL EROSION BMP DETAILS

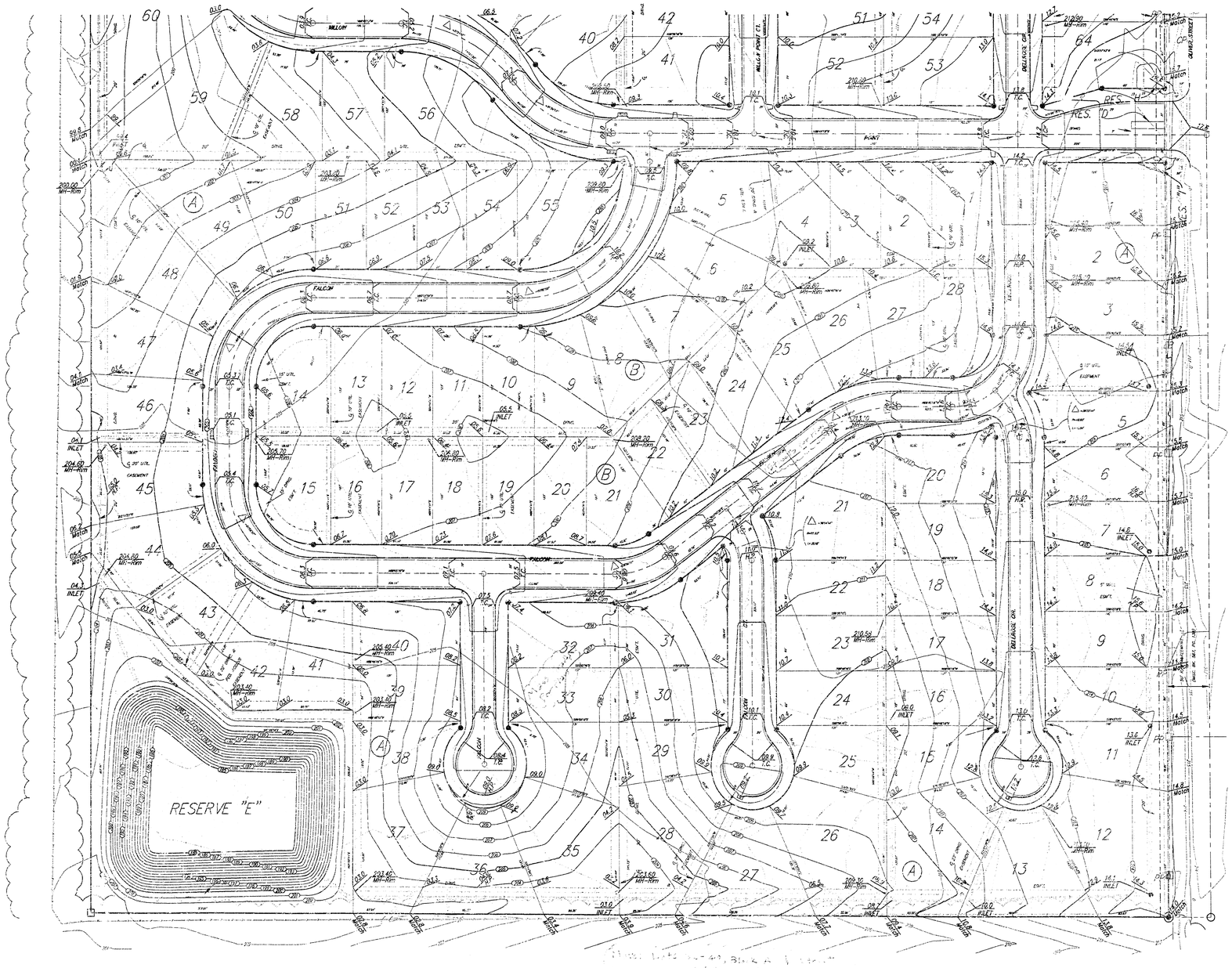
CHRISTOPHER M. CARRIER, P.E.
STORM WATER ENGINEER

PROJECT NUMBER | OCA NO.

DATE MAY 2001

BENCHMARK:
OLIVER AND 45TH ST. N. - TOP OF BRASS PLATE ON SW CORNER OF R.C.B.C. EAST OF INTERSECTION.
ELEV. = 1,398.88 NGVD (211.48 CITY DATUM)

60d NAIL IN H.L.P., 33' S. OF THE NW CORNER OF GOV'T. LOT 1 IN THE NE1/4 OF SEC. 26, TWP. 25-S, R-1-E OF THE 6TH P.M.
ELEV. = 1,377.19 NGVD (189.79 CITY DATUM)



SCALE: 1" = 60'
• = Iron

Area to be Graded

Existing Contour
Proposed Contour
Silt Fence

1. Contractor to use friable topsoil material for areas that will be seeded.
2. Compaction of 90% shall be obtained in all fill areas.
3. It shall be the contractors responsibility to protect the sanitary sewer, water distribution system, and storm water sewer during mass grading
4. All of Reserve "E" above the static water surface shall be seeded and mulched as follows: (Permanent Seeding)
   SEED -- Kansas Premium Fescue Blend; 8#/1000 Sq. Ft.
   MULCH -- 2 Tons Prarie Hay / Acre
   FERTILIZER -- 12-24-12 Ratio at 350 lbs./Ac.

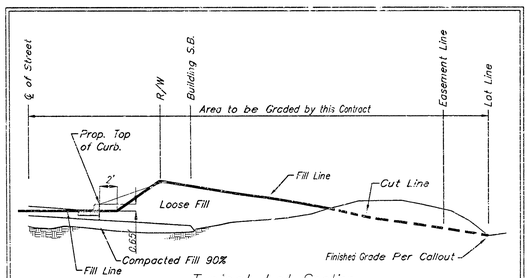
All other disturbed areas not covered by pavement are to be seeded and mulched as follows: (Temporary Seeding)
SEED -- Rye Grass (PLS)--5#/1000 Sq. Ft.

All costs associated with seeding shall be included in "Project Seeding".

EARTH WORK TOTALS

	C.Y. Fill	C.Y. Cut
Mass Grading	33,663	4,540
Pond Construction	0	27,185
Total Earthwork	33,663	31,725

Earthwork quantities do not include correction factors and are for reference only. All cost associated with mass grading shall be included in the bid item "Mass Grading".



Typical Lot Section
No Scale

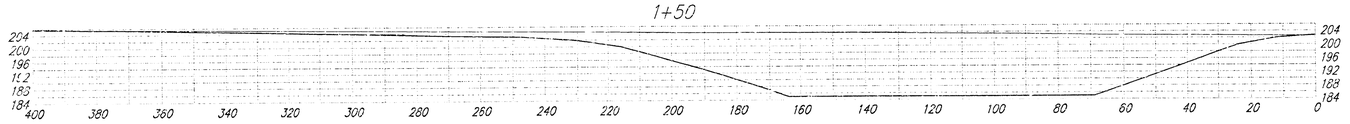
Eaglee Landing At North Oliver 2nd
MASS GRADING
WICHITA, KANSAS, SEDGWICK, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316-262-7271 • 355 DUG • WICHITA, KANSAS 67211

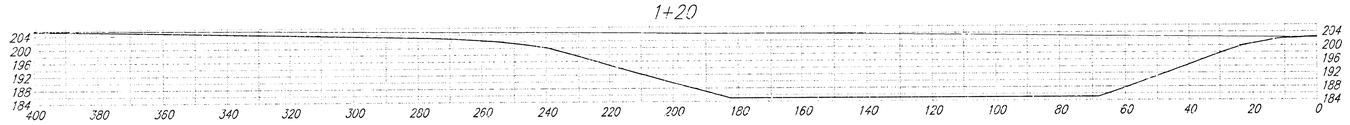
PROJECT NUMBER				SHEET 4 OF 7
DESIGN BLP	DRAWN AEG	APPROVED	DATE 2/03	SCALE NOTED

SCALE: 1" = 20'

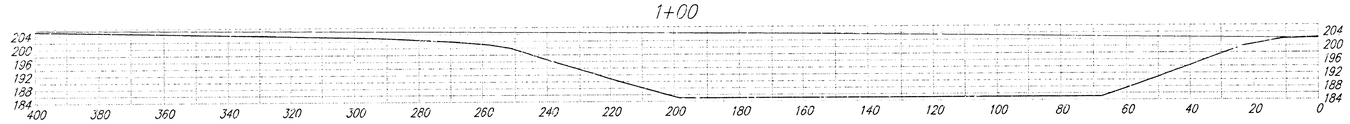
1+50



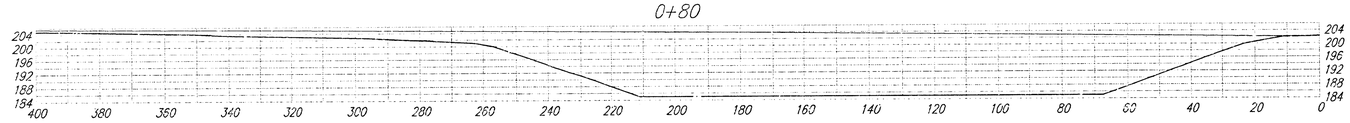
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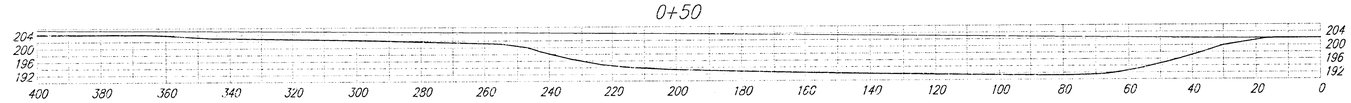
1+00



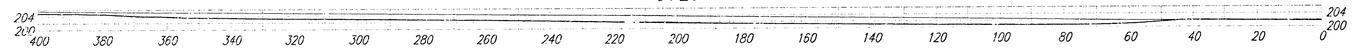
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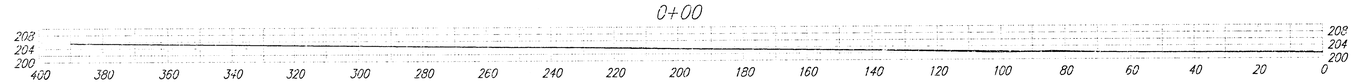
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0+20



0+00



EAGLES LANDING AT NORTH OLIVER 2

POND CROSS SECTION

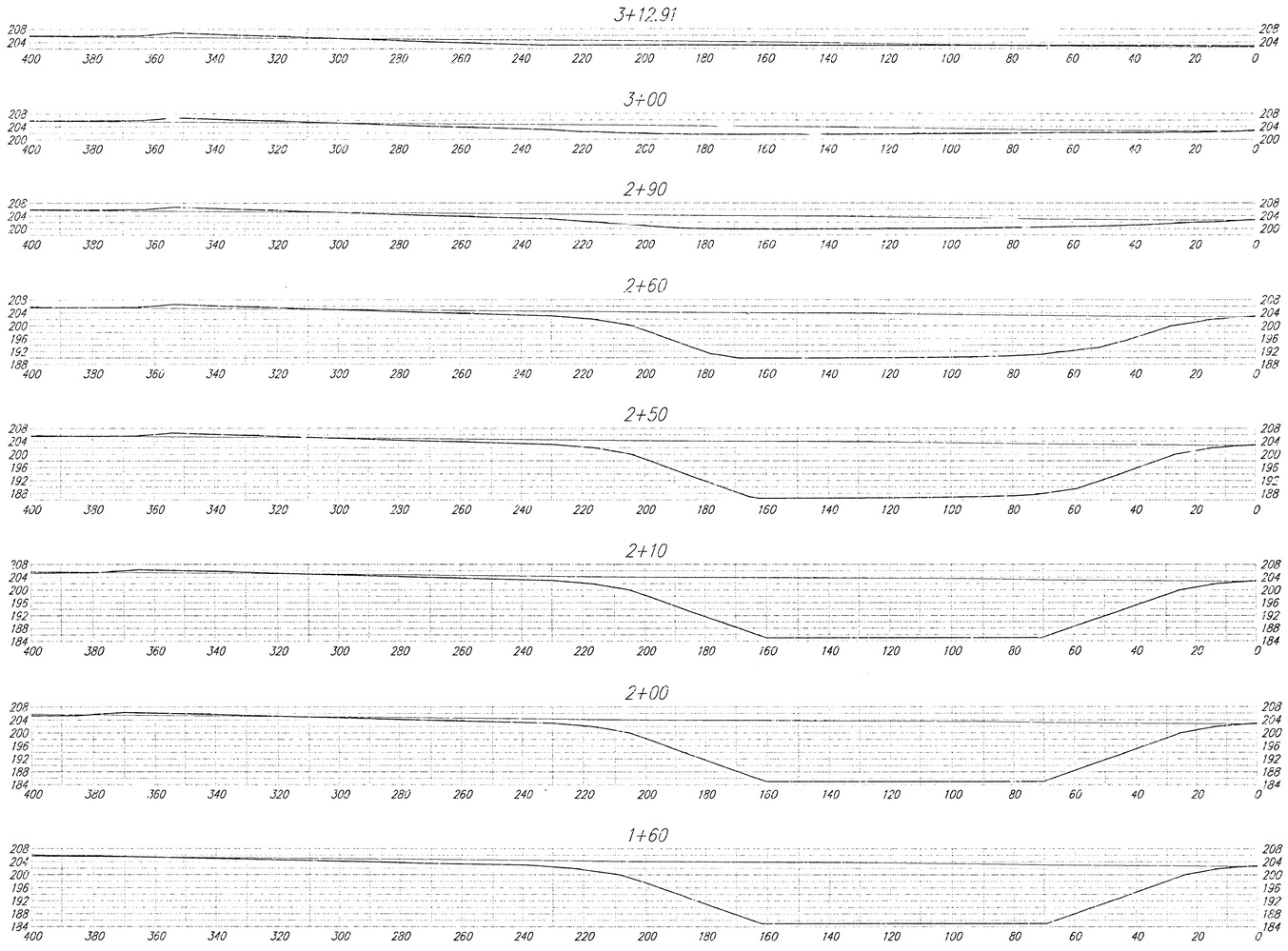
WICHITA, KANSAS, SEDWICK, KANSAS

BAUGHMAN COMPANY P.A.

ENGINEERING, SURVEYING, & PLANNING

316-262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER					SHEET 5 OF 7
DESIGN Staff	DRAWN	APPROVED	DATE 10/02	SCALE NOTED	



SCALE: 1" = 20'

EAGLES LANDING AT NORTH OLIVER 2ND

POND CROSS SECTION

WICHITA, KANSAS, SEDWICK, KANSAS

BAUGHMAN COMPANY P.A.
ENGINEERING, SURVEYING, & PLANNING
316 262 7271 • 315 ELLIS • WICHITA, KANSAS 67211

PROJECT NUMBER					SHEET 6 OF 7
DESIGN Staff	DRAWN	APPROVED	DATE 10/02	SCALE NOTED	

EAGLES LANDING AT NORTH OLIVER 2ND
WICHITA, SEDGWICK COUNTY, KANSAS

BENCHMARK:
"CLIVER AND 45TH ST. N. – 1'ø" OF BRASS PLATE ON SW CORNER OF R.C.T.C. EAST LEG INTERSECTION.
ELEV. = 1398.98 NGVD (271.48 CITY DATUM)

SOX NAIL IN H.L.P. 33' S. OF THE NW CORNER OF GOVT. LOT 1, IN THE NE1/4 OF SEC. 26, TWP. 26-S, R-1-E OF THE 6TH P.M.
ELEV. = 1377.19 NGVD (1136.19 CITY DATUM)

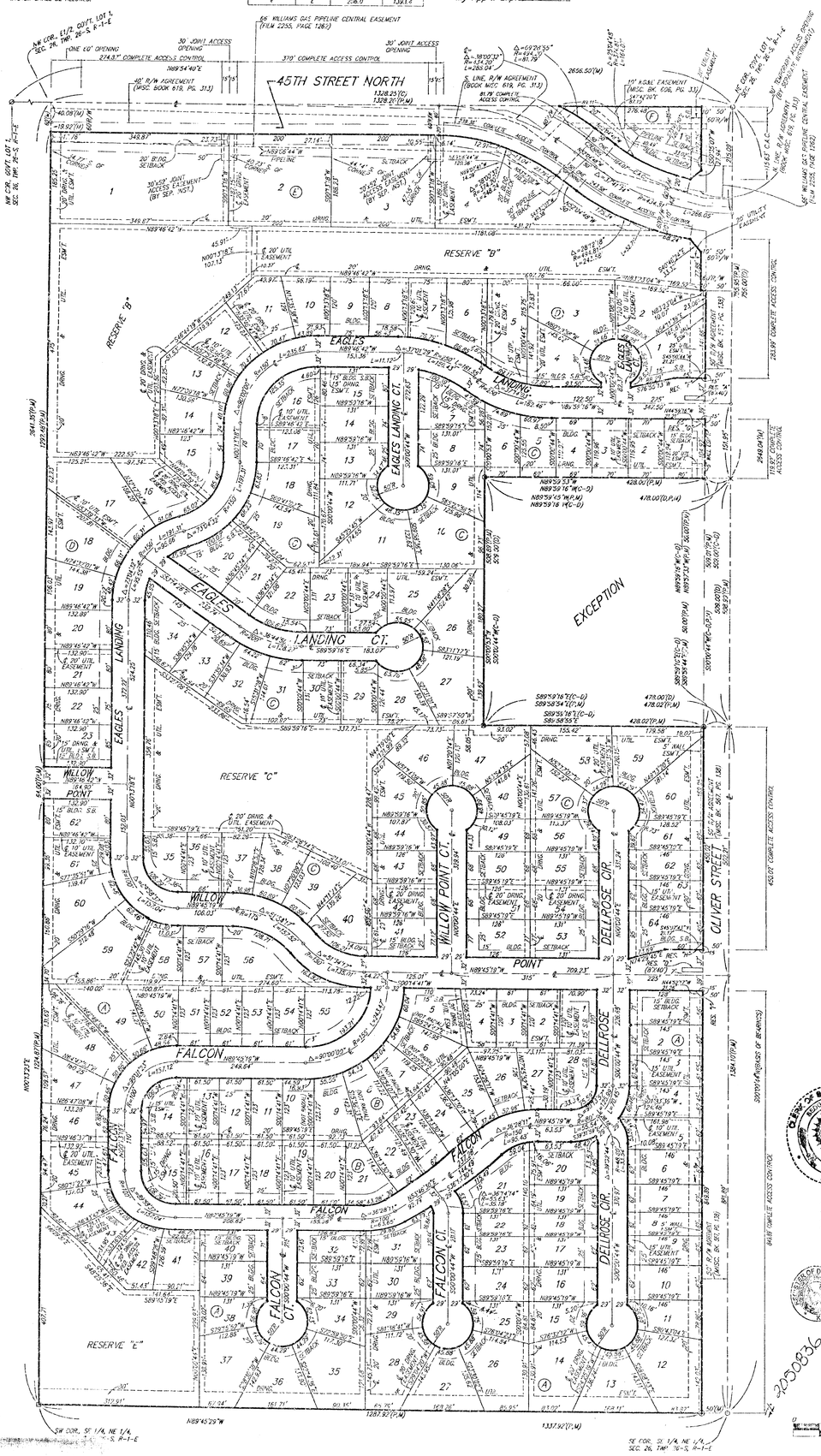
NOTE:
A DRAINAGE PLAN HAS BEEN DEVELOPED FOR THE COMMERCIAL LOTS AND IS ON FILE WITH THE CITY OF WICHITA, KANSAS. DRAINAGE WITHIN SHALL REMAIN AS DEPICTED OR AS MODIFIED WITH THE APPROVAL OF THE CITY ENGINEER OF THE CITY OF WICHITA, KANSAS. NO OBSTRUCTIONS WHICH IMPEDE THE FLOW OF THIS DRAINAGE PLAN SHALL BE ALLOWED.

A MASTER GRADING PLAN FOR DRAINAGE HAS BEEN DEVELOPED FOR THE RESIDENTIAL LOTS AND IS ON FILE WITH THE CITY OF WICHITA, KANSAS. ALL DRAINAGE EASEMENTS, RIGHTS-OF-WAY, OR RESERVES SHALL REMAIN AT ESTABLISHED GRADES OR AS MODIFIED WITH THE APPROVAL OF THE CITY ENGINEER OF THE CITY OF WICHITA, KANSAS. NO OBSTRUCTIONS WHICH IMPEDE THE FLOW OF THIS DRAINAGE SYSTEM SHALL BE ALLOWED.

MINIMUM BUILDING PAD ELEVATIONS FOR LOWEST OPENING TO THE STRUCTURES

LOT	BLOCK	ELEVATION CITY DATUM	ELEVATION NGVD
37-39, 41-44	A	205.0	1392.4
28-40, 42-46	C	201.0	1389.4
2	D	201.0	1394.4
3	D	208.0	1183.1
5	D	204.0	1391.4
6	D	203.0	1390.4
7	D	202.5	1376.9
8	D	201.5	1388.9
9	D	201.0	1388.4
10-11	D	200.5	1387.9
12	D	190.0	1385.4
13-17	D	196.5	1383.9
1	E	196.5	1383.9
2	E	200.5	1387.9
3	E	203.5	1389.9
4	E	206.0	1391.4

66' WILLIAMS GAS PIPELINE CENTRAL EASEMENT (FILM 2255, PAGE 1280)


NW COR. E1/2 GOVT. LOT 1, SEC. 26, TWP. 26-S, R-1-E
ONE 40' OPENING
30' JOINT ACCESS OPENING
274.87' COMPLETE ACCESS CONTROL
370' COMPLETE ACCESS CONTROL
30' JOINT ACCESS OPENING
N89°54'40"E
40' R/W AGREEMENT (MISC. BOOK 619, PG. 313)
45TH STREET NORTH
1328.25'(C)
1328.25'(M,M)
81.W. COMPLETE ACCESS CONTROL
S89°46'42"W
349.87'
348.87'
200'
271.41'
10.55'
20' BLDG. SETBACK
50'
22.73'
S89°46'44"W
110.06'
54.14' CORNER OF LOT 1
SLOPE EASEMENT
30' JOINT ACCESS EASEMENT (BY SEP. INST.)
S89°13'16"E
188.23'
S00°13'16"W
S89°46'42"W
20' UTIL. EASEMENT
20' DRNG. EASEMENT
188.23'
S00°13'16"W
S89°46'42"W
431.21'
N89°46'42"W
781.08'
RESERVE "B"
N89°46'42"W
45.91'
N00°13'18"E
102.13'
6' UTIL. EASEMENT
20' UTIL. EASEMENT
20' DRNG. EASEMENT
N89°46'42"W
153.36'
L=111.12'
R=370.00'
Δ=17°12'29"
N89°46'42"W
322.55'
N89°46'42"W
132.89'
N89°46'42"W
132.90'
N89°46'42"W
132.90'
N89°46'42"W
132.90