GENERAL NOTES

1. UNLESS SHOWN OR STATED OTHERWISE ON THESE DRAWINGS, MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF WICHITA CONCRETE PAVEMENT AND ASPHALTIC CONCRETE PAVEMENT SPECIFICATIONS.

2. CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF SEVENTY–TWO (72) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:

   KANSAS ONE–CALL 1–800–344–7233 OR 687–2470

   (LOCAL WICHITA)
   THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:

SBC (TELEPHONE)	800–870–8390
COX COMMMUNICATIONS (CABLE)	262–0661
WESTAR (ELECTRIC)	383–8600
KANSAS GAS SERVICE (GAS)	832–3101
CITY OF WICHITA WATER & SEWER MAINT.	262–6000
AQUILA (GAS)	800–303–0357

3. 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.

4. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS 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. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.

5. RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES AND EXCESS EXCAVATION WHICH IS TO BE WASTED SHALL BE DISPOSED OF ON SITES TO BE PROVIDED BY THE CONTRACTOR. THESE SITES SHALL BE APPROVED BY THE ENGINEER AS TO SUITABILITY, APPEARANCE AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, WILL LEAVE AN UNSIGHTLY APPEARANCE WILL NOT BE APPROVED. ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

6. THIS PROJECT INCLUDES A CERTAIN AMOUNT OF ROLL TYPE CURB CONSTRUCTION. ROLL CURBS SHALL BE DEPRESSED THROUGH ALL DRIVEWAY OPENINGS WHEN SUCH DRIVES ARE CONSTRUCTED AS A PART OF THE PROJECT. NO MORE THAN 2 DRIVES 20 FEET IN WIDTH OR EQUIVALENT COMBINATIONS THEREOF ARE TO BE CONSTRUCTED WITH THIS PROJECT.

7. TRANSITION CURB FROM FULL HEIGHT COMBINATION CURB AND GUTTER TO ROLL TYPE COMBINATION CURB AND GUTTER IS TO BE PAID AS BID FOR LINEAL FEET COMBINED CURB AND GUTTER (3 5/8" ROLL).

8. A SAW CUT OF AT LEAST ONE–HALF THE DEPTH OF THE EXISTING SURFACE COURSES OR ONE–FOURTH THE DEPTH OF THE EXISTING TOTAL PAVEMENT THICKNESS SHALL BE PROVIDED AT LOCATIONS WHERE PROPOSED CONSTRUCTION ABUTS AN EXISTING SURFACE OR PAVEMENT FOR WHICH PARTIAL REMOVAL OF THAT SURFACE OR PAVEMENT IS REQUIRED. SAW JOINT TO FACILITATE REMOVAL WITHIN THREE (3) FEET OF EXISTING JOINTS WILL NOT BE PERMITTED AND FOR SUCH INSTANCES THE LIMITS OF REMOVAL SHALL EXTEND TO THE EXISTING JOINT. SUCH SAW CUTS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE CONSIDERED AS SUBSIDIARY TO THE REMOVAL OF SURFACE OR PAVEMENT.

9. EARTHWORK IS PART OF STORM WATER SEWER #638
   PROJECT NO. 468–84423

10. CONTRACTOR SHALL RESEED AND MULCH ALL DISTURBED AREAS AS FOLLOWS:
    PERENNIAL RYE @ 200 LBS./ACRE
    10–20–10 @ 200 LBS/ACRE
    COST SHALL BE CONSIDERED SUBSIDIARY TO PROJECT SEEDING.

11. OTHER PUBLIC OR PRIVATE IMPROVEMENT PROJECTS MAY BE UNDERWAY SIMULTANEOUSLY. THE CONTRACTOR SHALL COORDINATE WITH ANY CONTRACTORS CONSTRUCTING OTHER PORTIONS OF THE SURROUNDING PROJECTS.

EARTHWORK SUMMARY

EXCAVATION	3,800 C.Y.
LOOSE FILL (90% STD.)	4,100 C.Y.
CONTRACTOR FURNISHED	300 C.Y.

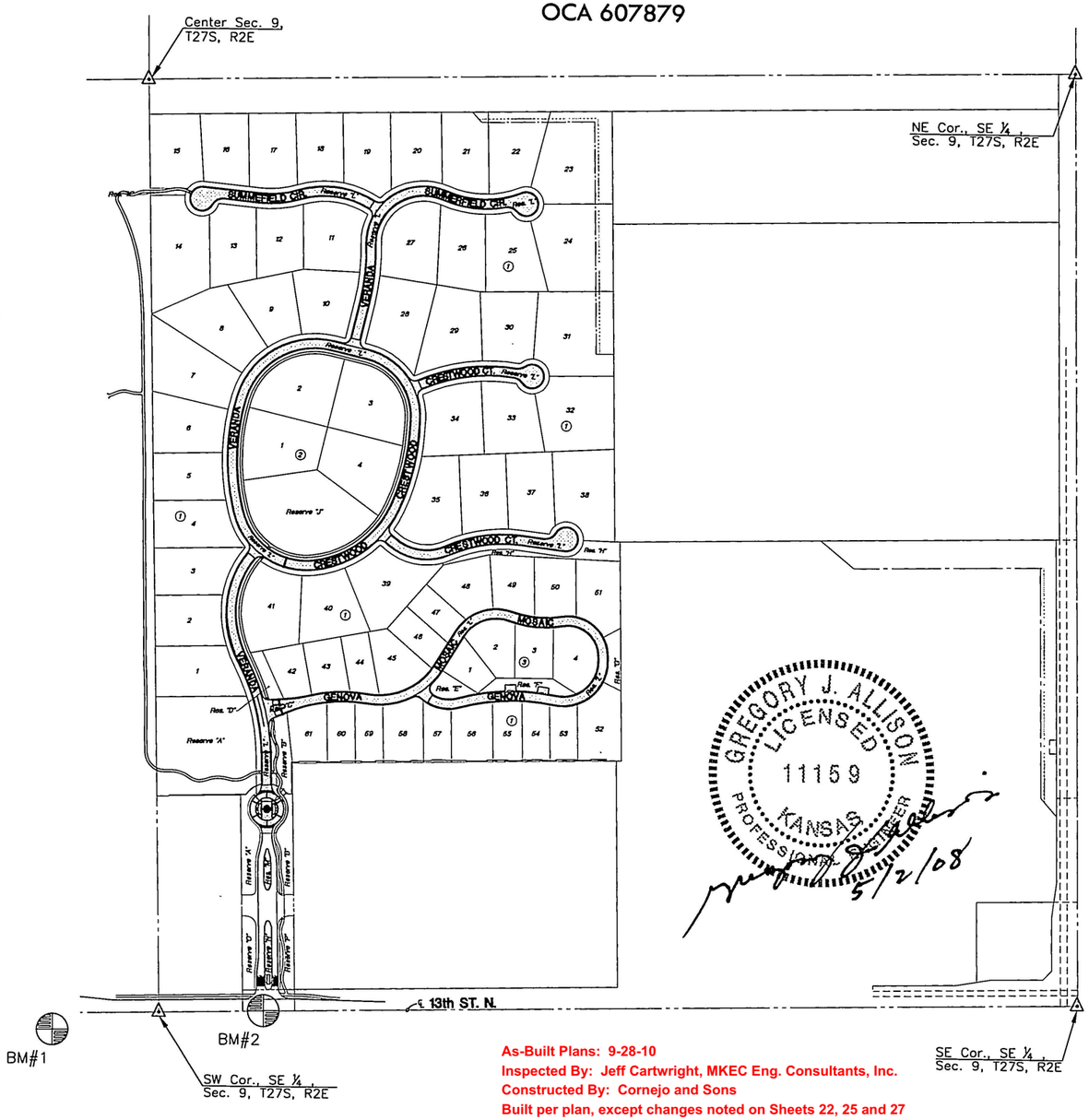
PAVING PLANS

THE WATERFRONT RESIDENTIAL ADDITION

PPP #188

THE CITY OF WICHITA, KANSAS
JAMES L. ARMOUR, P.E. - CITY ENGINEER

OCA 607879



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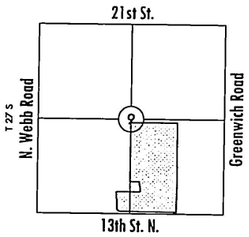
1"=200'



VICINITY MAP
No Scale

INDEX TO DRAWINGS

BENCHMARKS

BM#1 "□" WW @ West end S. Headwall S. side 13th St. 310' W. & 41' S of S ¼ Cor. 9–27S–2E
Elev.=1377.32

BM#2 "□" Front center inlet on N. side 13th St. 300' E. of S ¼ Cor. 9–27S–2E
Elev.=1382.78

PROJECT LENGTH	
Veranda	2,220 L.F.
Crestwood	1,020 L.F.
Genova/Mosaic	1,740 L.F.
Summerfield Cir (E)	470 L.F.
Summerfield Cir (W)	540 L.F.
Crestwood Ct (N)	350 L.F.
Crestwood Ct (S)	580 L.F.

GREGORY J. ALLISON LICENSED 11159 KANSAS PROFESSIONAL ENGINEER
5/2/08

As-Built Plans: 9-28-10
Inspected By: Jeff Cartwright, MKEC Eng. Consultants, Inc.
Constructed By: Cornejo and Sons
Built per plan, except changes noted on Sheets 22, 25 and 27

APPROVED AS NOTED
BY CITY ENGINEER OF WICHITA,
BY WICHITA WATER & SEWER DEPARTMENT,
& BY WICHITA FIRE DEPARTMENT

Paving (Public Works) Julianne Kallman 5-2-08

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR
THE WATERFRONT RESIDENTIAL ADDITION

TITLE SHEET
SHEET TITLE

PPP #188
PROJECT NUMBER

DFL / DMU / GJA
DESIGNED DRAWN CHECKED

ISSUED
May 2008

REVISED

SHEET NO.
1 of 33

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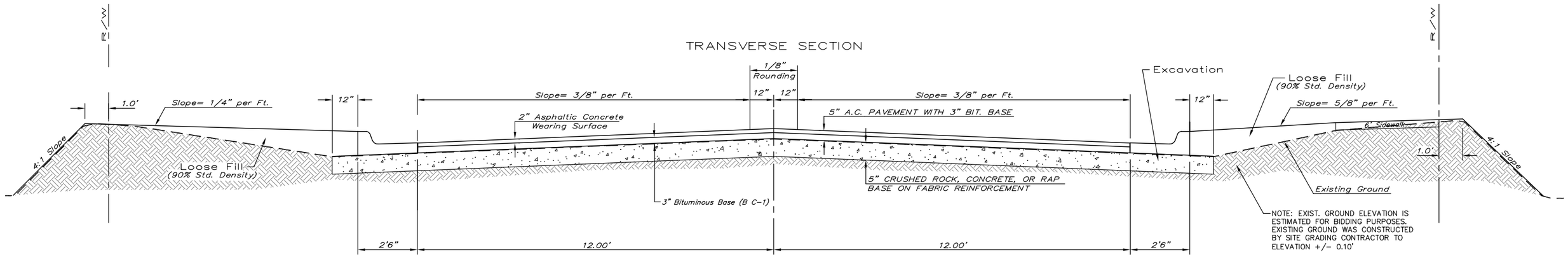
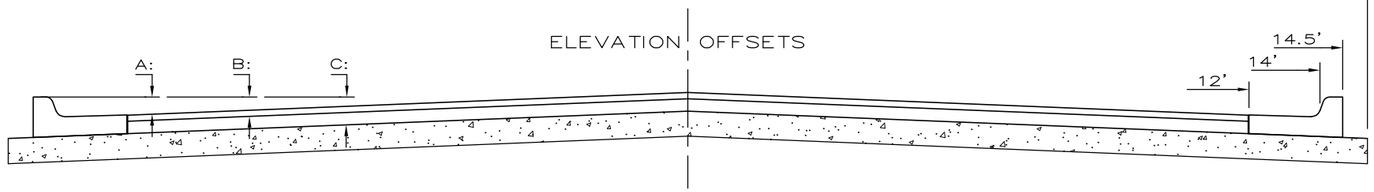
PLOTTED: Friday, May 02, 2008 @ 09:37AM

TYPICAL 29' B–B PAVEMENT DETAILS

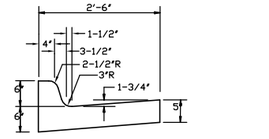
TRANSVERSE SECTION



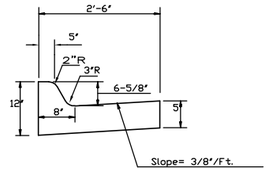
ELEVATION OFFSETS



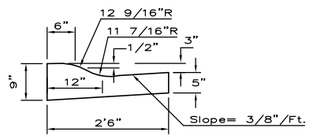
	DISTANCE FROM CENTERLINE (LT. & RT.)										
	0'	2'	4'	6'	7'	8'	10'	12'	14'	14.5'	15.5'
A: Top of Curbs to Top of Surface Lift	0.13	0.18	0.24	0.30	0.33	0.36	0.43	0.49	–	–	–
B: Top of Curbs to Top of Upper Base Lift	0.30	0.35	0.41	0.47	0.50	0.53	0.60	0.66	–	–	–
C: Top of Curbs to Top of C.R. Subgrade	0.55	0.60	0.66	0.72	0.75	0.78	0.85	0.91	0.97	0.98	1.01



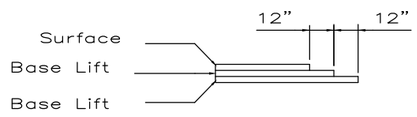
STATE CURB
MODIFIED TYPE I
COMBINED CURB & GUTTER



COMBINED CURB & GUTTER



COMBINED ROLL TYPE CURB & GUTTER



TRANSVERSE CONSTRUCTION JOINTS

Transverse construction joints shall be constructed in flexible base pavements at locations where pavement joins existing flexible base pavement as shown by the detail. All costs associated with the construction of the transverse joint shall be included in the bid price for Square Yards 5" ASPHALTIC CONCRETE (3" BITUMINOUS BASE).

General Notes

FABRIC BASE REINFORCEMENT SHALL BE B X 1100 GEOGRID AS MANUFACTURED BY TENSAR CORPORATION OR APPROVED EQUAL. FABRIC BASE REINFORCEMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CRUSHED ROCK SHALL BE UNIFORMLY GRADED FROM 1–1/2" MAXIMUM SIZE TO NOT MORE THAN 10% PASSING A NO. 200 SIEVE. ROCK QUALITY SHALL BE THE SAME AS SPECIFIED FOR COARSE AGGREGATE FOR CONCRETE MIXES.

ROCK BASE IS TO BE COMPACTED AND SMOOTHED WITH A STEEL FACED ROLLER PROIR TO PLACEMENT OF ASPHALT. TACK COAT WILL NOT BE APPLIED TO ROCK BASE.

A TACK COAT OF EMULSIFIED ASPHALT (SC–1H OR CSS–1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.

BITUMINOUS BASE AND ASPHALTIC CONCRETE WEARING SURFACE SHALL BE PLACED WITH A LAYDOWN MACHINE HAVING AUTOMATIC CONTROLS FOR LINE AND GRADE.

CONSTRUCTION JOINTS IN EACH LIFT SHALL BE STAGGERED A MINIMUM DISTANCE OF ONE (1) FOOT FROM JOINTS IN PRECEDING LIFTS AND PLACED SO THAT A JOINT WILL BE CONSTRUCTED ON THE CENTERLINE OF THE TOP LIFT.

THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 5" ASPHALTIC CONCRETE (3" BITUMINOUS BASE.)

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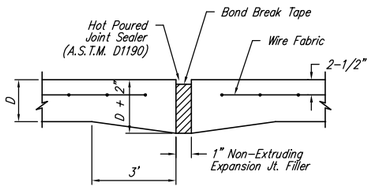
THE CITY OF WICHITA

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

29' PAVEMENT
5" ASPHALTIC CONCRETE
W/ CRUSHED ROCK BASE

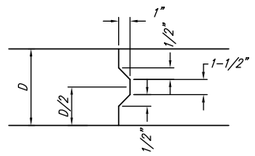
JAMES L. ARMOUR, P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
PPP #188	607879
DATE: May 2008	Sheet 2 of 33

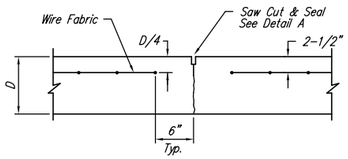


EXPANSION JOINT

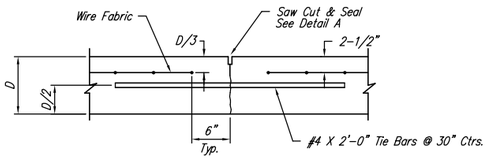
NOTE: Extra Thickness to be Subsidiary to Price of Square Yards Pavement



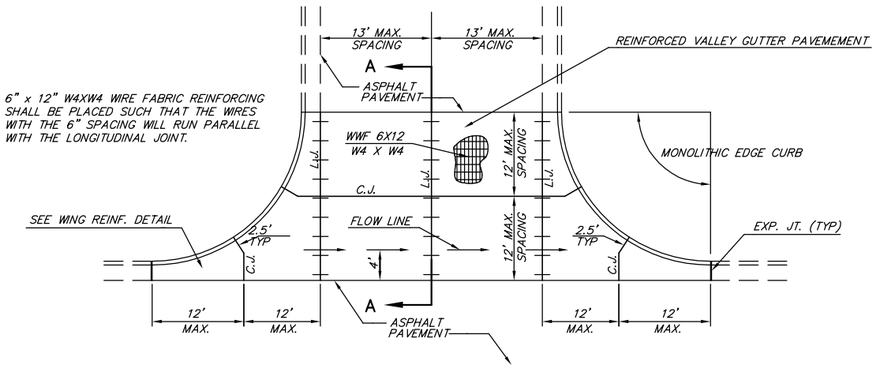
KEYWAY DETAIL



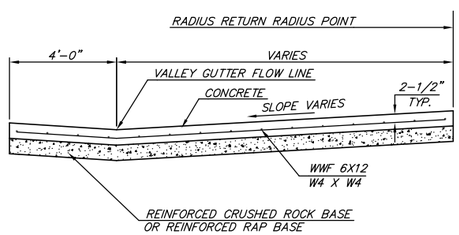
CONTRACTION JOINT DETAIL (C.J.)



LONGITUDINAL JOINT DETAIL (L.J.)

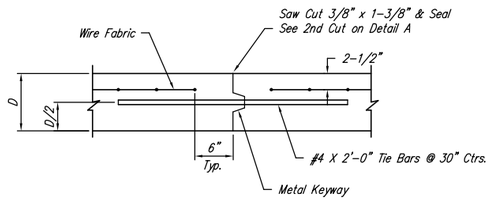


PLAN

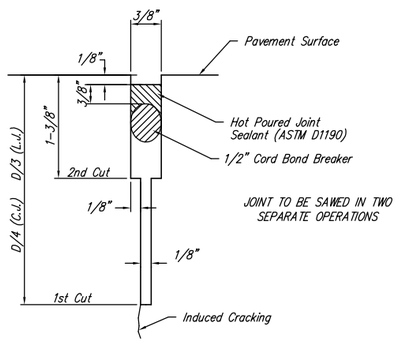


SECTION A-A

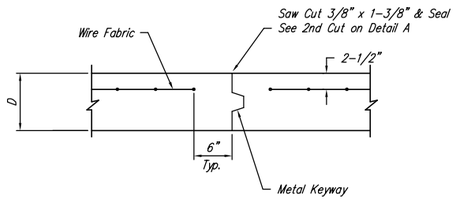
REINFORCED VALLEY GUTTER DETAIL



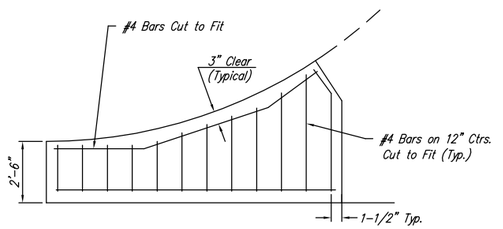
OPTIONAL LONGITUDINAL JOINT DETAIL (L.J.)



SAW JOINT DETAIL



OPTIONAL CONTRACTION JOINT



WING REINFORCING DETAIL

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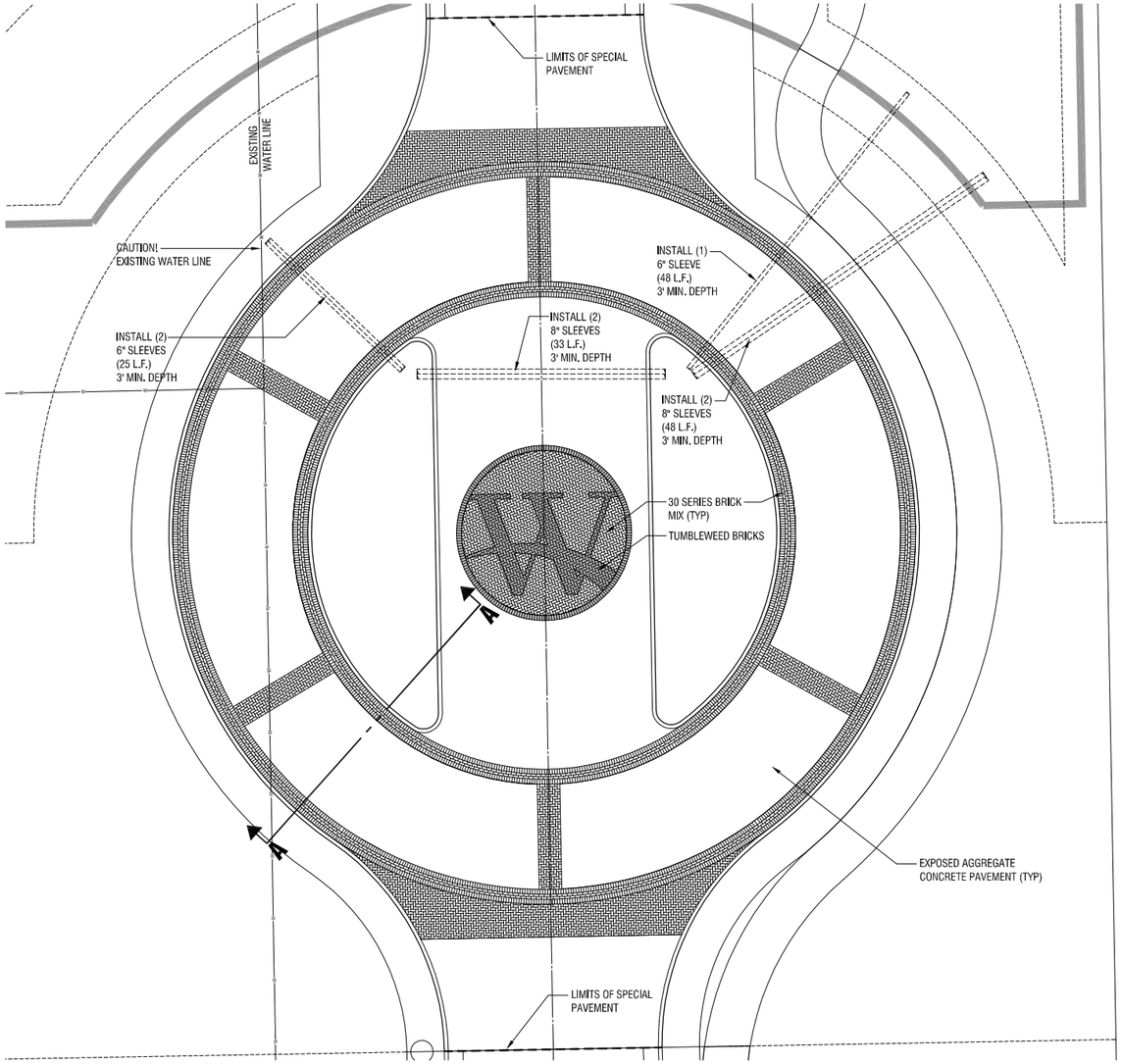
THE CITY OF WICHITA

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

VALLEY GUTTER DETAILS

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

PROJECT NUMBER	OCA NUMBER
PPP #188	607879
DATE: May 2008	Sheet 3 of 33



ROUNDABOUT PLAN - PAVING PATTERN

SCALE: 1" = 10'-0"

NOTES:

1. CONCRETE PAVEMENT WITHIN THE ROUNDABOUT SHALL BE A CITY OF WICHITA (7) SACK SAND MIX WITH AN MA-1 GRADATION. INTEGRAL COLOR SHALL BE DAVIS COLORS. COLOR: SAN DIEGO BUFF COLOR GROUP: STANDARD. OR APPROVED EQUAL.

2. CONTRACTOR TO PROVIDE JOINTING AND CASTING SEQUENCE PLAN FOR ENGINEER'S APPROVAL.

3. CLAY BRICK PAVERS SHALL BE 2-3/4"x4"x8", AND MEET OR EXCEED ASTM C-902. COMPRESSIVE STRENGTH SHALL BE 8,000 PSI MINIMUM, AND HAVE MAXIMUM ABSORPTION OF 5%. PAYMENT SHALL BE AT THE CONTRACT BID PRICE PER SQUARE YARD FOR "PAVING BRICK".

4. CONCRETE BASE COURSE SHALL BE BID AS "CONCRETE PAVEMENT (6" UNIFORM) (AE)". CONC. BAND AND ADDITIONAL CONCRETE THICKNESS IN TRANSITION TO APRON AND IN THICKENED C&G SHALL BE SUBSIDIARY TO "CONCRETE BASE (6"UNIFORM) (AE)".

5. ADDITIONAL FORM WORK FOR CONSTRUCTION OF THE CONCRETE PAVER WILL BE SUBSIDIARY TO THE BID ITEM "PAVING BRICK".

6. SAND BEDDING SHALL MEET KDOT STANDARDS FOR FINE AGGREGATE. AN UNCOMPACTED SAND LAYING COURSE SHALL BE SPREAD EVENLY OVER THE AREA TO BE PAVED AND THEN SCREEDED TO A LEVEL OF APPROXIMATELY 1" THICKNESS. ONCE SCREEDED AND LEVELED TO THE DESIRED ELEVATION, THE SAND LAYING COURSE SHALL NOT BE DISTURBED IN ANY WAY.

7. PAVER COLORS SHALL BE RANDOMLY PLACED WITH SMALL GROUPINGS OF LIKE COLORS.

8. BLOCKS SHALL BE PLACED WITH THE CHAMFERED SIDE UP, AND JOINT SPACES KEPT UNIFORM APPROXIMATELY 1/8" THICK. THE GAPS AT THE EDGE OF THE PAVED SURFACE SHALL BE FILLED WITH PAVING BLOCKS CUT TO FIT. CUTTING SHALL BE ACCOMPLISHED TO LEAVE A CLEAN EDGE TOWARD THE TRAFFIC SURFACE, USING A MASONRY SAW. WHENEVER POSSIBLE, NO CUTS SHOULD RESULT WITH A PAVER LESS THAN ONE-THIRD OF ITS ORIGINAL DIMENSION. INDIVIDUAL PAVERS ARE TO BE PLACED IN THE PATTERN SHOWN.

9. PAVING BRICK SHALL BE VIBRATED TO THEIR FINAL LEVEL IN THE SAND LAYING COURSE BY TWO OR THREE PASSES OF A VIBRATING COMPACTOR CAPABLE OF 3000 TO 5000 POUNDS COMPACTION FORCE WITH THE SURFACE CLEAN AND JOINTS OPEN.

10. AFTER VIBRATION, CLEAN CONCRETE SAND SHALL BE SPREAD OVER THE PAVING STONE SURFACE, ALLOWED TO DRY, AND VIBRATED INTO THE JOINTS WITH ADDITIONAL PASSES OF THE PLATE VIBRATOR SO AS TO COMPLETELY FILL THE JOINTS. A LIGHT COATING OF SAND SHALL BE SWEPT OVER THE COMPLETED SURFACE AND LEFT TO WEATHER IN.

11. A SAND LAYER SHALL BE MAINTAINED OVER PAVER SURFACES DURING ADJACENT ASPHALT CONSTRUCTION, AND REMAIN FOR A MINIMUM OF THIRTY DAYS AFTER ASPHALT SURFACES HAVE BEEN COMPLETED.

12. FILTER FABRIC TO BE MIRAFI N-SERIES FILTER FABRIC OR APPROVED EQUAL

13. ELECTRONIC DRAWING OF BRICK PAVER AREA IS AVAILABLE FOR CONTRACTOR USE.

14. CONTRACTOR TO PROVIDE A 4' x 4' MOCK UP OF EXPOSED AGGREGATE CONCRETE FOR ENGINEER APPROVAL PRIOR TO CONSTRUCTION OF PAVEMENT. SUBSIDIARY TO PROJECT.

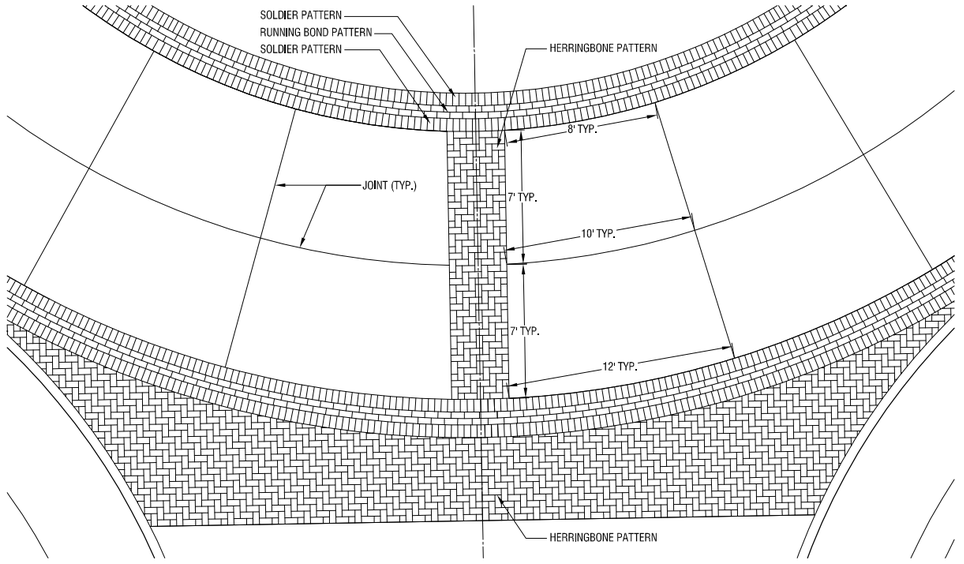
15. ALL MATERIAL AND LABOR TO CONSTRUCT PAVER UNDERDRAIN SYSTEM (DRAIN TILE, WASHED GRAVEL, PVC DRAIN, FILTER FABRIC, TIE TO EXISTING INLET) SHALL BE SUBSIDIARY TO BID ITEM "BRICK UNDERDRAIN".

16. CONTRACTOR TO INSTALL PAVERS SHALL BE I.C.P.I. CERTIFIED.

BRICK PAVER SCHEDULE

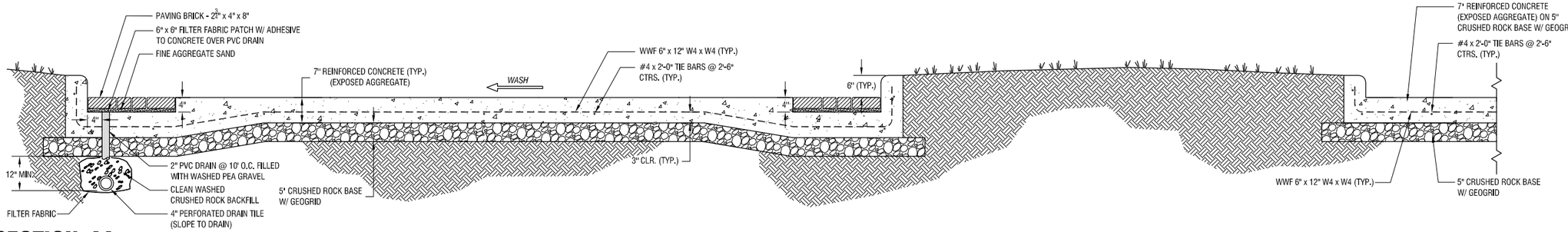
MANUFACTURER	STYLE	COLOR	MIX
KANSAS BRICK & TILE	TUMBLED	30 SERIES	40%
KANSAS BRICK & TILE	TUMBLED	30 SERIES FLASHED (OLD COLONIAL)	60%
BELDEN BRICK	CHAMFERED	TUMBLEWEED	N/A

NOTE: BRICK PAVERS ARE AVAILABLE THROUGH LUSCO BRICK AND STONE (TEL: 316.262.0406)



ROUNDABOUT BRICK PAVER/JOINT DETAIL

SCALE: 1/4" = 1'-0"



SECTION 'AA'

SCALE: 3/4" = 1'-0"

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR

THE WATERFRONT RESIDENTIAL ADDITION

ROUNDABOUT PAVING DETAIL
SHEET TITLE

PPP #188
PROJECT NUMBER

DFL
DESIGN BY

RKO
DRAWN BY

GJA
CHECKED BY

ISSUED
May 2008
REVISED

SHEET NO.
4 of 33

PLOTTED: Tuesday, May 20, 2008 @ 09:08AM

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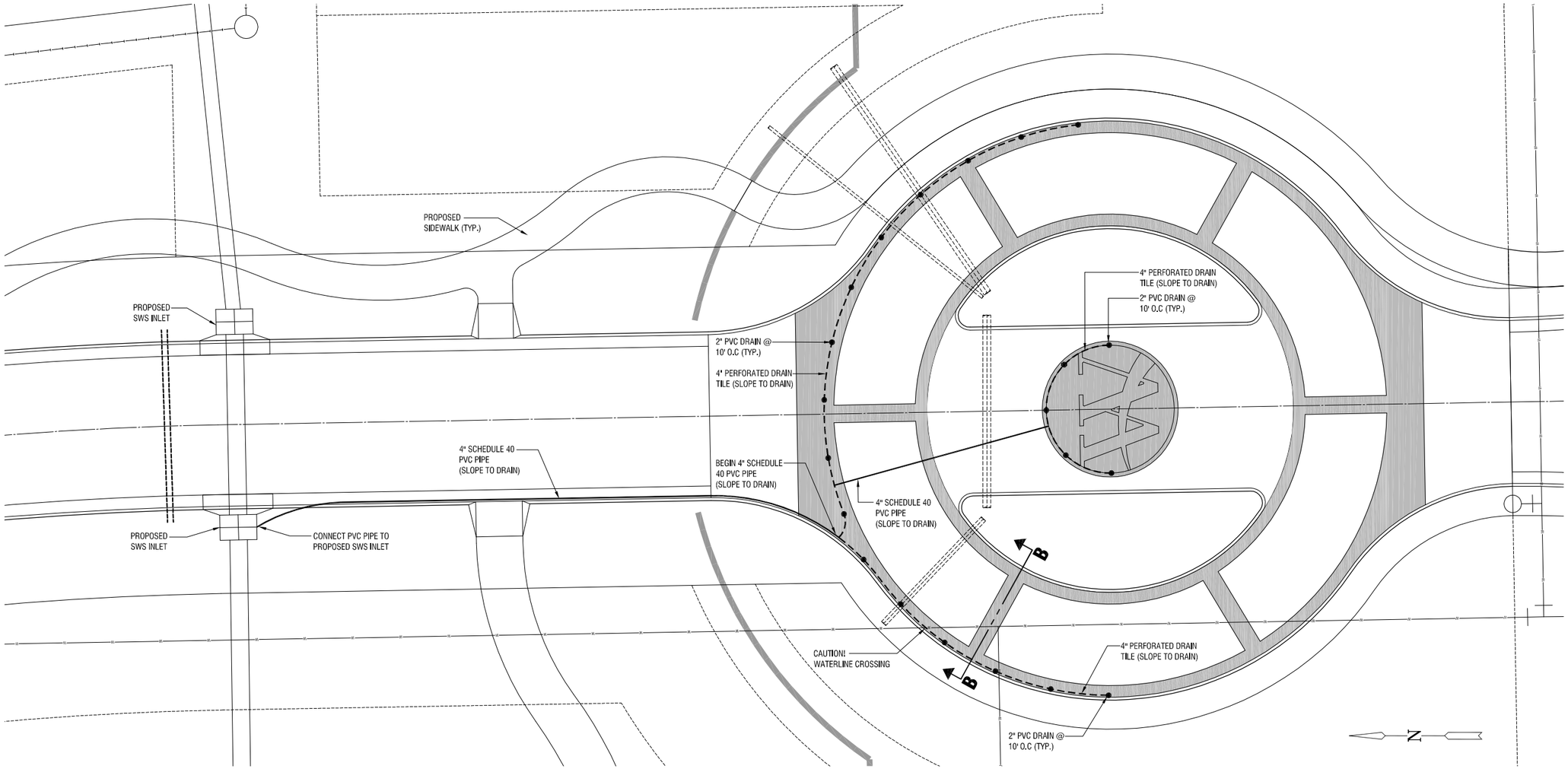
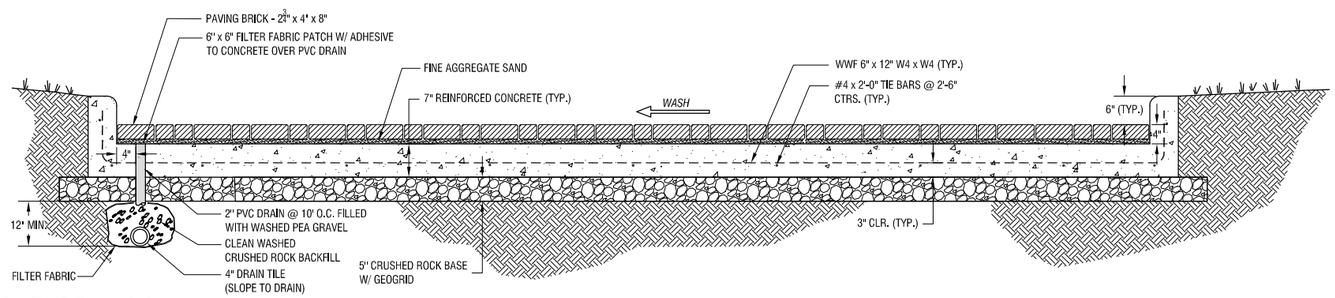


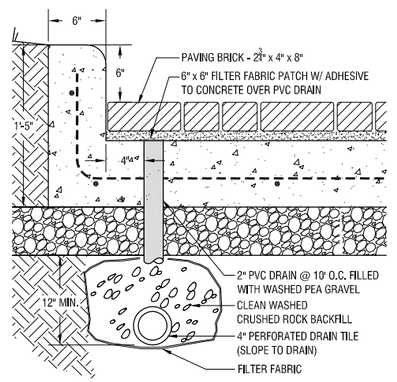
ROUNDABOUT DRAIN SYSTEM PLAN

SCALE: 1" = 10'-0"



SECTION 'BB'

SCALE: 3/4" = 1'-0"



CURB DETAIL

SCALE: 1-1/2" = 1'-0"

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR

THE WATERFRONT RESIDENTIAL ADDITION

ROUNDABOUT PAVING DETAIL
SHEET TITLE

PPP #188
PROJECT NUMBER

DFL
DESIGN BY

RKO
DRAWN BY

GJA
CHECKED BY

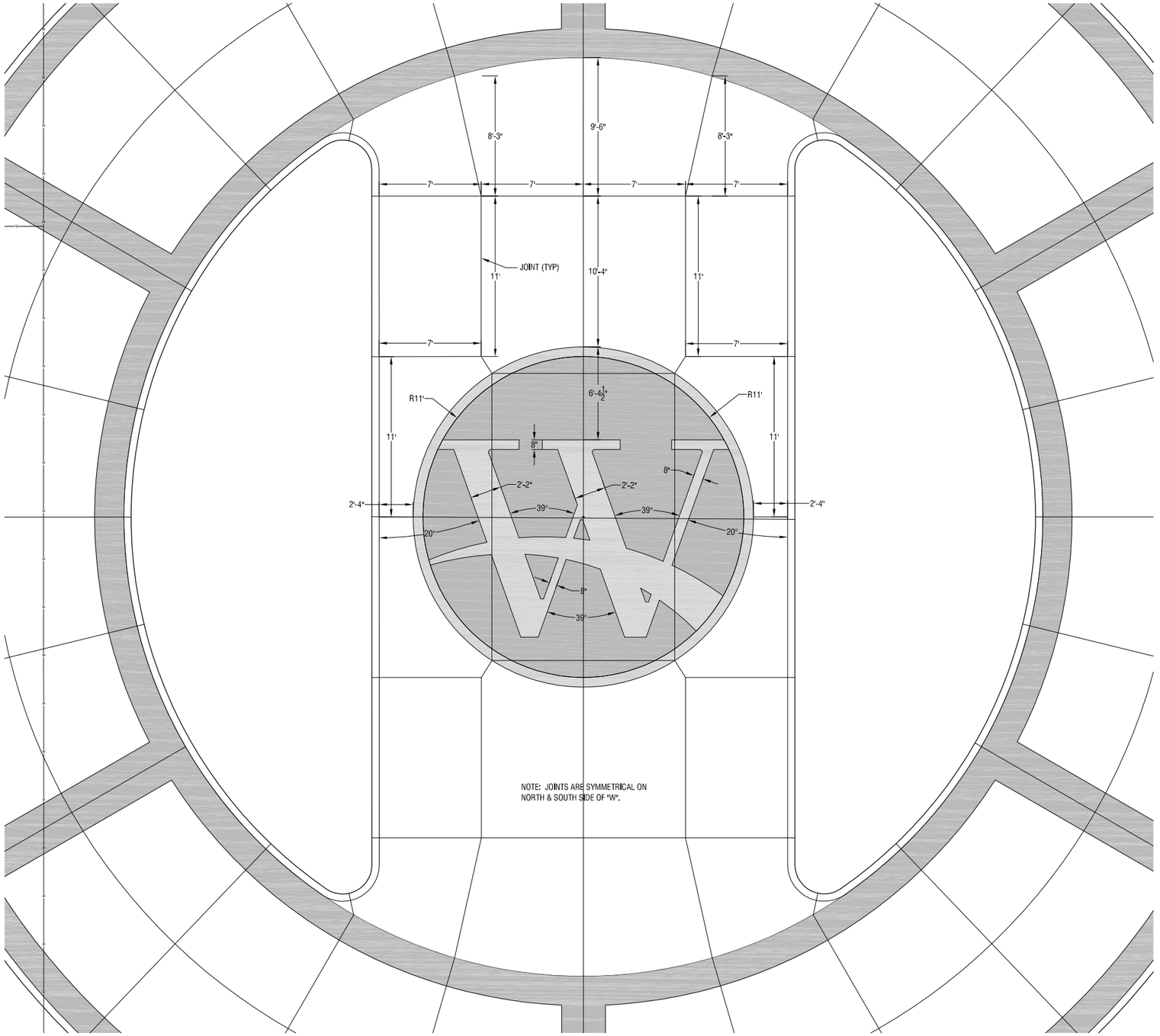
ISSUED
May 2008

REVISED

SHEET NO.
5 of 33

J:\CIVIL\06266\DWG\PAV\RESIDENTIAL\06266_PAVDETAILS3.DWG

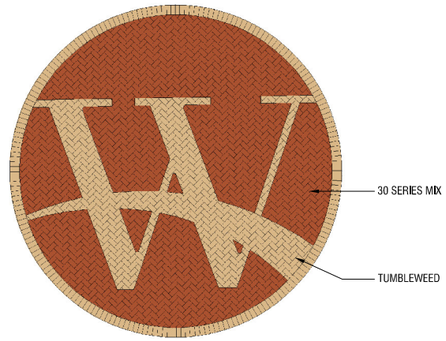
PLOTTED: Tuesday, May 20, 2008 @ 09:09AM



BRICK INLAY/JOINT DETAIL

SCALE: 1/4" = 1'-0"

NOTE: JOINTS ARE SYMMETRICAL ON NORTH & SOUTH SIDE OF "W".



BRICK INLAY COLOR SCHEME

NOT TO SCALE

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR

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ROUNDABOUT PAVING DETAIL
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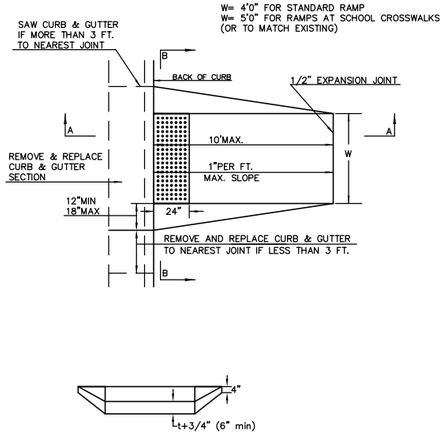
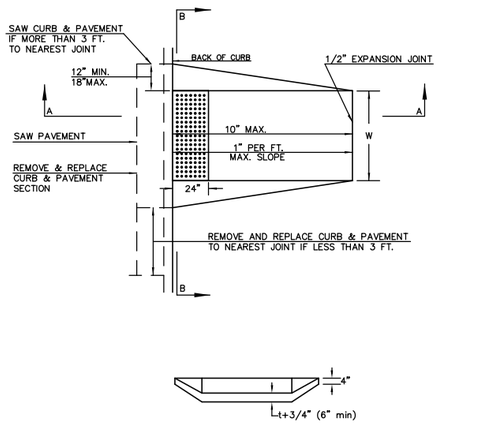
PLOTTED: Tuesday, May 20, 2008 @ 09:09AM

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER (TYPE A)



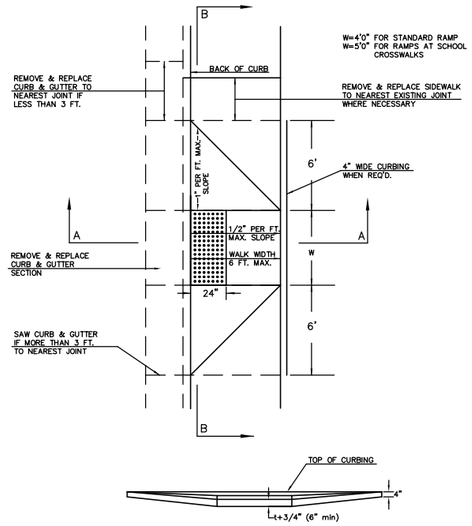
SECTION B–B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR CONCRETE STREETS WITH MONOLITHIC CURB (TYPE A)



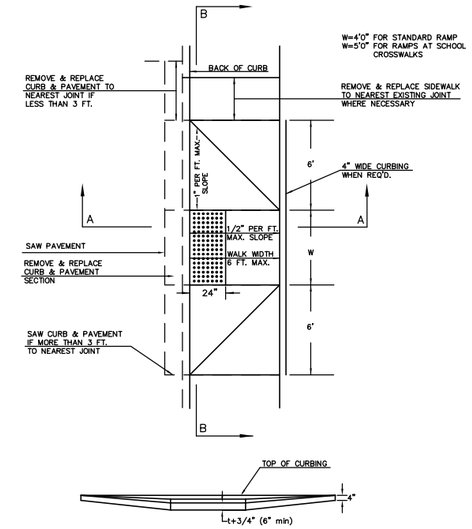
SECTION B–B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER AND FULL WALK (TYPE B)

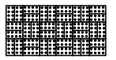


SECTION B–B

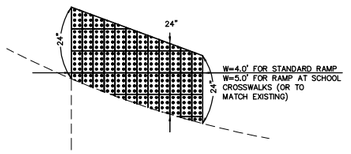
STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH MONOLITHIC CURB AND FULL WALK (TYPE B)



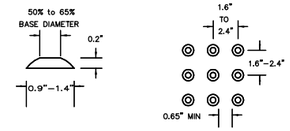
SECTION B–B



TYPICAL BRICK PATTERN

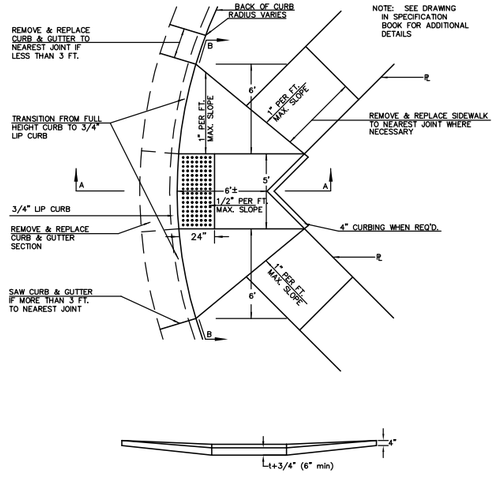


BRICK PATTERN WHEN RAMP INTERSECTS A RADIUS



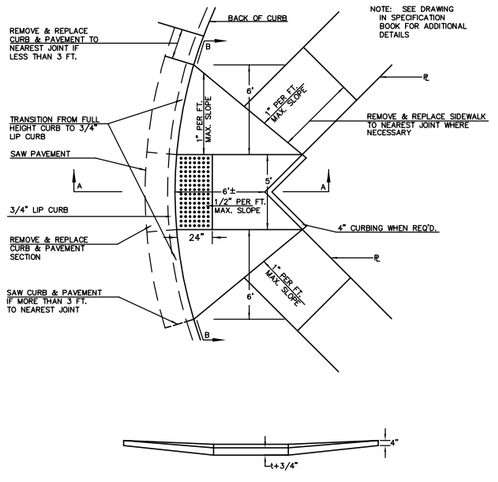
DOME DETAIL

STANDARD WHEELCHAIR RAMP CONSTRUCTION DEAIL FOR STREET WITH COMBINED CURB AND GUTTER ON RADIUS WITH 6'± FROM BACK OF CURB TO PROPERTY CORNER (TYPE C)



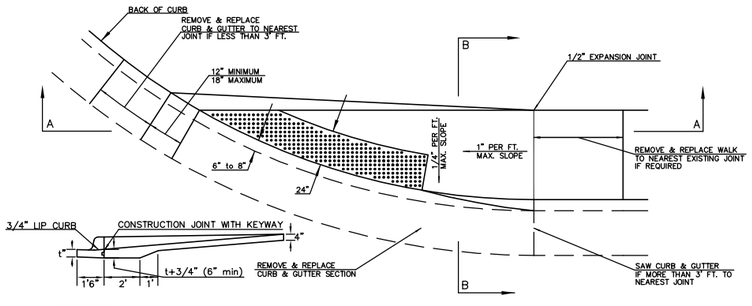
SECTION B–B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREET WITH MONOLITHIC CURB ON RADIUS WITH 6'± FROM BACK OF CURB TO PROPERTY CORNER (TYPE C)



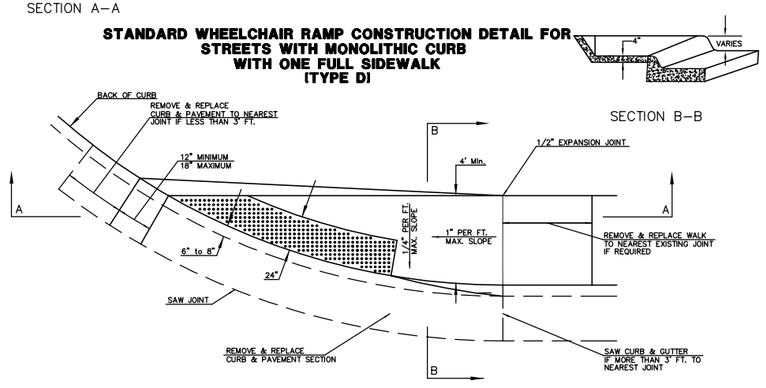
SECTION B–B

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH COMBINED CURB & GUTTER WITH ONE FULL SIDEWALK (TYPE D)

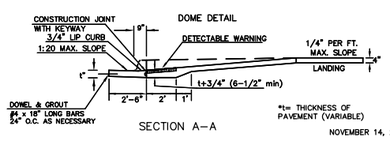


SECTION A–A

STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR STREETS WITH MONOLITHIC CURB WITH ONE FULL SIDEWALK (TYPE D)

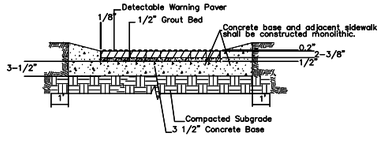


SECTION B–B



SECTION A–A

NOVEMBER 14, 2003



SECTION B–B

TYPICAL SECTION DETECTABLE WARNING PAVER

NOTE: RAMPS TO COMPLY WITH LATEST ADAAG GUIDELINES. PAVESTONE DETECTABLE WARNING PAVERS (OR AN APPROVED EQUAL) SHALL BE USED IN ALL WHEELCHAIR RAMPS. THE RED PAVER SHALL BE INSTALLED USING A BASKET WEAVE/PARQUET PATTERN. OTHER PATTERNS MAY BE USED WITH APPROVAL OF ENGINEER. SAND FILL JOINTS. ALIGN DOMES IN THE DIRECTION OF PEDESTRIAN TRAVEL.

MKEC REV. 5–18–04
REV. 11–03–03

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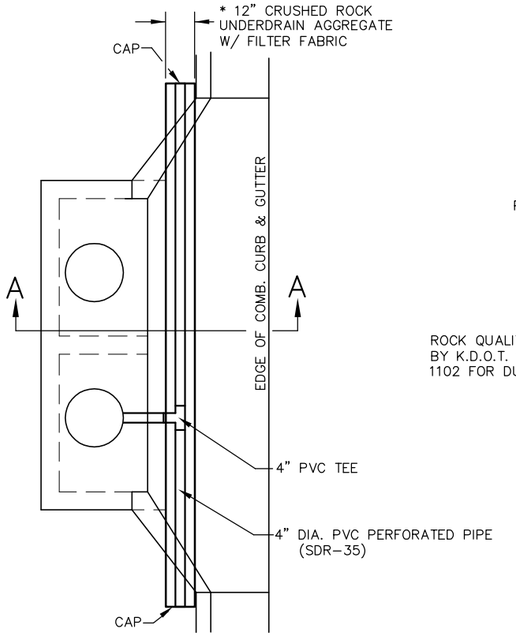
THE CITY OF WICHITA

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

WHEELCHAIR RAMP DETAILS

JAMES L. ARMOUR, P.E.– CITY ENGINEER

PROJECT NUMBER	OCA NUMBER
PPP #188	607879
DATE: May 2008	Sheet 7 of 33

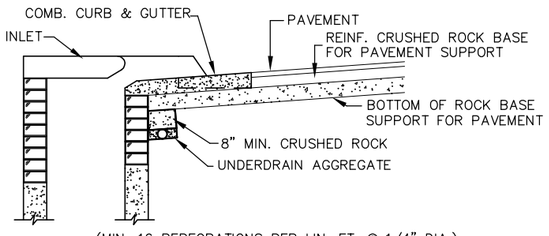


PLAN

* UNDERDRAIN AGGREGATE
PERCENT OF AGGREGATE RETAINED

1"	0
3/4"	0 to 10
3/8"	45 to 80
#4	90 to 100
#8	95 to 100

ROCK QUALITY SHALL CONFORM TO THE REQUIREMENTS SPECIFIED BY K.D.O.T. 1990 EDITION STANDARD SPECIFICATION SUBSECTION 1102 FOR DURABILITY CLASS 1.

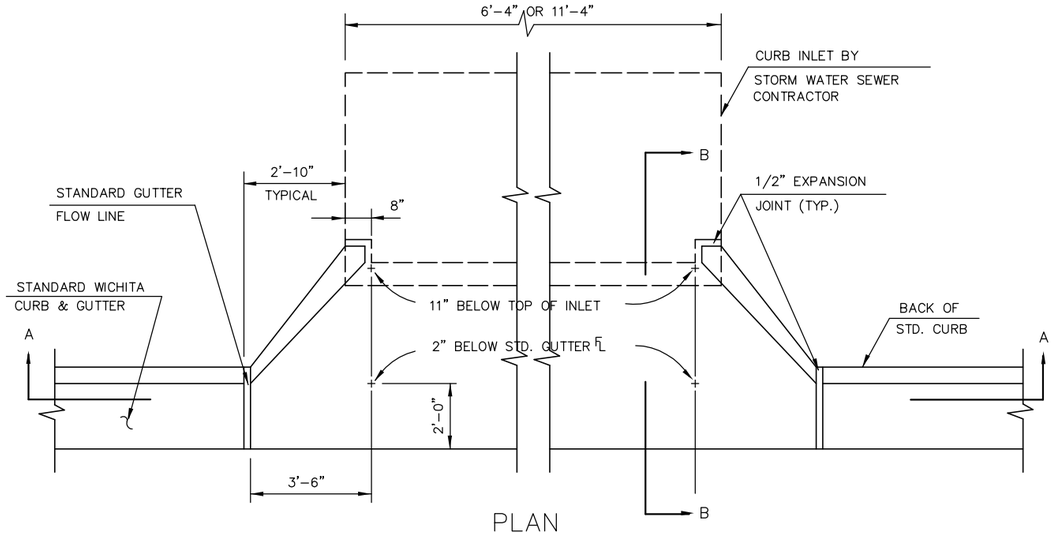


(MIN. 16 PERFORATIONS PER LIN. FT. @ 1/4" DIA.)
PERFORATION TO BE ON BOTTOM HALF

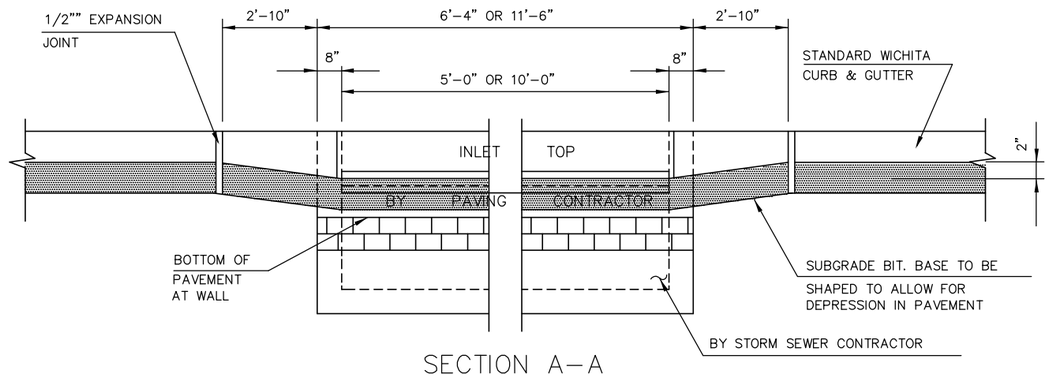
SECTION A-A

NOTE: PLACE 4" PVC PERFORATED PIPE AT ALL DRAINAGE SUMP LOCATIONS.
COST OF UNDERDRAIN SYSTEM TO BE INCIDENTAL TO THE REINFORCED CRUSHED ROCK SUBGRADE.
INLET TYPE MAY VARY FROM THAT SHOWN.

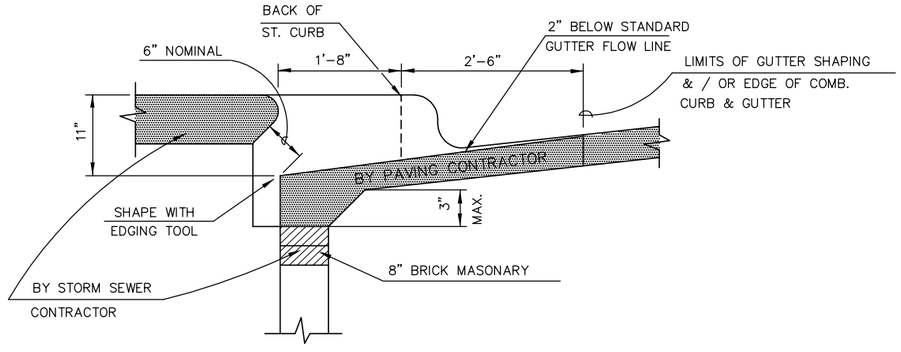
PAVEMENT UNDERDRAIN DETAIL



PLAN



SECTION A-A



SECTION B-B

TYPE 1A INLET HOOKUP

(BY PAVING CONTRACTOR)

GENERAL NOTES

1. USE THE CONCRETE MIX SPECIFIED FOR CITY OF WICHITA CONCRETE PAVEMENT. ALL EXPOSED EDGES SHALL BE FINISHED WITH AN EDGING TOOL.
2. TYPE 1A INLET HOOKUP WILL BE PAID EACH REGARDLESS OF SIZE.
3. ADDITIONAL CURB & GUTTER CONSTRUCTION NECESSARY TO CONNECT SET BACK INLET TO PAVEMENT WILL BE PAID FOR AT THE UNIT PRICE BID FOR EACH INLET

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR
THE WATERFRONT
RESIDENTIAL ADDITION

ASPHALT HOOKUP AND UNDERDRAIN DETAILS
SHEET TITLE

PPP #188
PROJECT NUMBER

DFL
DESIGN BY
DM
DRAWN BY
GJA
CHECKED BY

ISSUED
March 2008
REVISED

SHEET NO.
8 of 33

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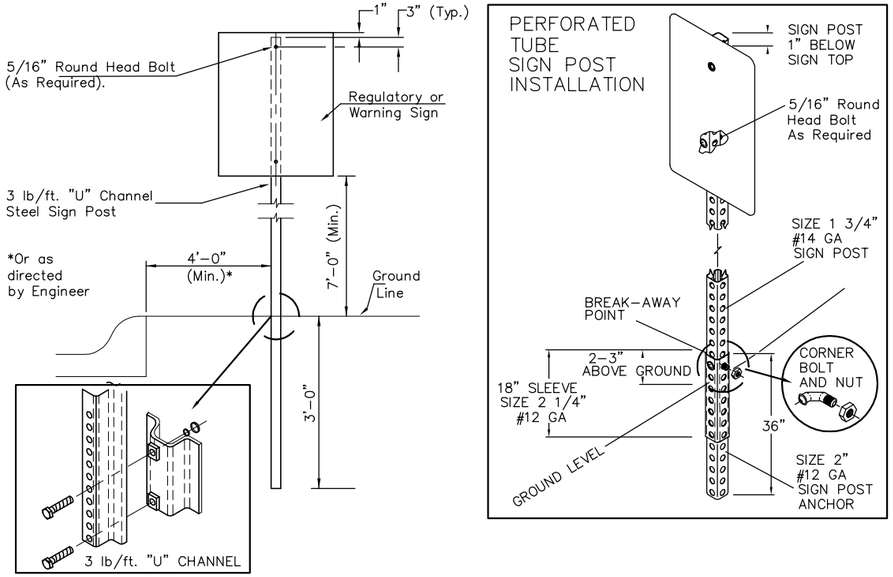
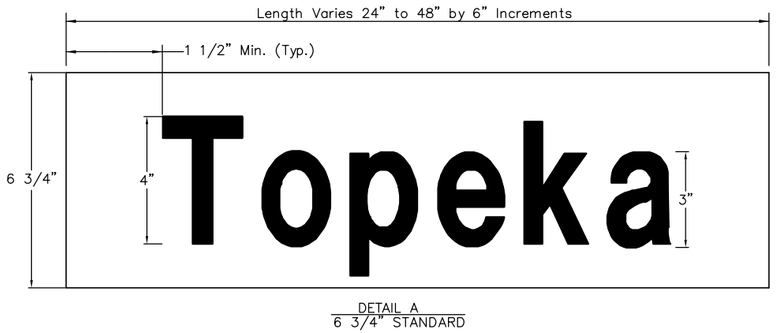
PLOTTED: Tuesday, May 20, 2008 @ 09:10AM

FHWA REG NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	SHEETS
7	KANSAS	PPP #188	08	9	33

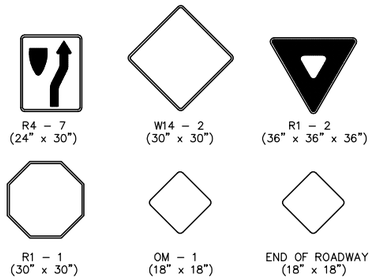


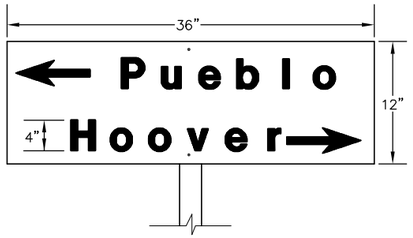
TYPICAL TRAFFIC CONTROL SIGN MOUNTING INSTALLATION

CURB AND GUTTER SECTION

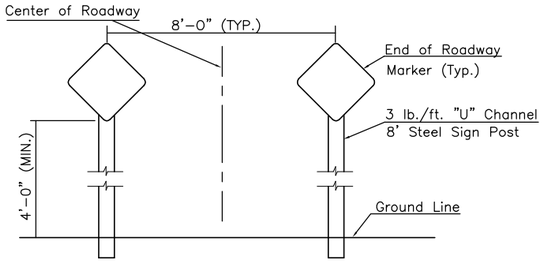


DETAIL A
6 3/4" STANDARD

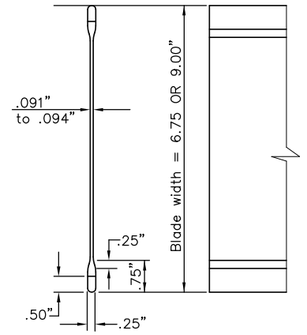




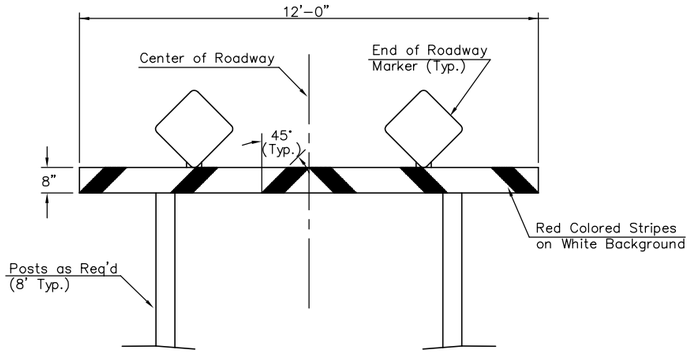
FLAT PLATE STREET NAME SIGN



TYPICAL END OF ROADWAY SIGN MOUNTING INSTALLATION



STREET NAME SIGN
BLADE DETAILS

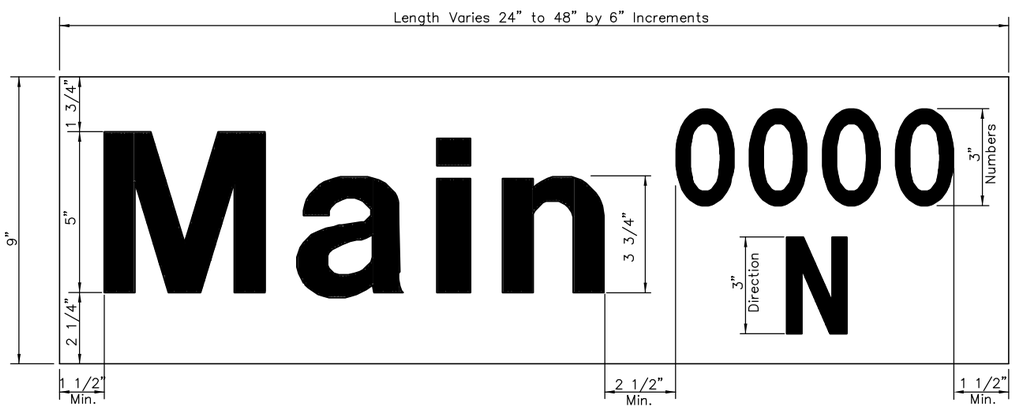


TYPE I BARRICADE DETAIL W/ E.O.R. MARKERS

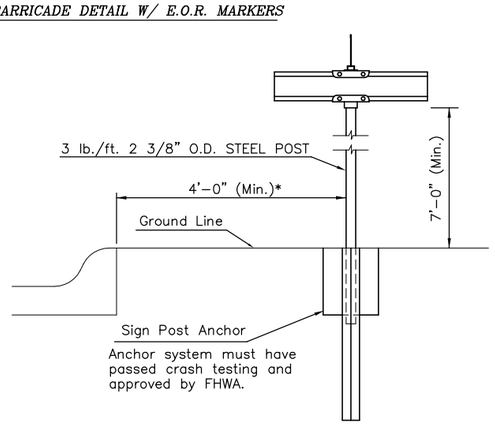
SIGN ASSEMBLY TABLE

STATION	OFFSET	SIGN	QUANTITY*
VERANDA (S)			
18+17	22' RT.	SNS	1
18+55.55	32' RT.	R4-7 & OM1-3	1
23+36	21' RT.	SNS	1
23+36	28' LT.	SNS	1
VERANDA (M)			
18+10	28' LT.	SNS	1
CRESTWOOD			
18+65	28' LT.	SNS	1
20+66	28' LT.	SNS	1
24+95	28' LT.	SNS	1
GENOVA			
10+66	-	R4-7 & OM1-3	1
14+40	29' RT.	SNS	1
MOSAIC			
14+97	32' RT.	SNS	1
21+59	24' LT.	FLAT PLATE SNS	1
VERANDA (N)			
13+87	28' LT.	SNS	1
SUMMERFIELD CIR			
14+33	28' RT.	SNS	1
TOTAL			14

* FOR INFORMATION ONLY



DETAIL B
9" METRO



TYPICAL STREET NAME SIGN MOUNTING INSTALLATION

CURB AND GUTTER SECTION

STREET NAME	NO. BLADES REQ'D		
	6 3/4" STD.	9" METRO	12" FLAT
Veranda	5		
Genova	3		
Mosaic	1		
Mosaic/Genova			1
Crestwood	4		
Crestwood Ct 10601-10651		1	
Crestwood Ct 10701-10751		1	
Summerfield Cir 10401-10522		1	
Summerfield Cir 10601-10712		1	

NOTE: REFERENCES BELOW TO "STANDARD SPECIFICATIONS" DENOTE "STANDARD SPECIFICATION FOR STATE ROAD AND BRIDGE CONSTRUCTION EDITION 1990" BY THE KANSAS DEPARTMENT OF TRANSPORTATION.

1. POST ANCHORS: POSTS SHALL BE ANCHORED WITH A YIELDING BASE POST SUPPORT AS DETAILED.
2. POSTS FOR TRAFFIC CONTROL SIGNS: POSTS SHALL BE GALVANIZED AND CONFORM TO THE REQUIREMENTS OF SUBSECTION 1620 OF THE STANDARD SPECIFICATIONS, EXCEPT THAT ALL POSTS SHALL WEIGH 3 LBS./FOOT MINIMUM.
3. POSTS FOR STREET NAME SIGNS (SNS): POSTS SHALL BE 9 FEET LONG, CONSTRUCTED FROM 2 3/8" O.D. GALVANIZED STEEL PIPE WEIGHING A MINIMUM OF 3 LBS./FOOT. POSTS SHALL BE POSITIONED SO THAT THE BOTTOM BLADE IS 7 FEET ABOVE GRADE.
4. POSTS FOR END OF ROADWAY SIGN TO BE 8' LONG AND INSTALLED A MINIMUM OF 4' FROM ROADWAY TO BOTTOM OF SIGN.
5. SIGN BLANKS FOR TRAFFIC CONTROL SIGNS: SIGN BLANKS SHALL BE FABRICATED FROM 0.080" ALUMINUM ALLOY 6063-T6 CONFORMING TO THE REQUIREMENTS OF SUBSECTION 1626 OF THE STANDARD SPECIFICATIONS.
6. SIGN BLADES FOR STREET NAME SIGNS: EXTRUDED ALUMINUM BLADES SHALL BE ALUMINUM ALLOY CONFORMING TO 6063-T6 OR 5052-H38 (ASTM SPECIFICATION B221, LATEST ISSUE). BLADES SHALL HAVE AN ALODINE OR PHOSPHATE ETCHED FINISH. BLADES SHALL HAVE SQUARE CORNERS AND NO HOLES.

   MINIMUM BLADE LENGTH SHALL BE 24". MAXIMUM BLADE LENGTH SHALL BE 48". LENGTH VARIES BY INCREMENTS OF 6".

   BLADES BEARING THE STREET NAMES SHALL BE FIRMLY ATTACHED TO THE MOUNTING BRACKETS USING ALLEN-TYPE SET SCREWS. THE BLADES SHALL BE ORIENTED PARALLEL TO THE STREET.
7. MOUNTING BRACKETS FOR SIGNS: DIE-CAST ALUMINUM BRACKETS SHALL BE ALUMINUM ALLOY 360 HAVING A TENSILE STRENGTH OF 44,000 PSI. THE BRACKETS SHALL BE SMOOTHLY FINISHED FREE OF PITS, BURRS, AND FLAWS. EACH BRACKET SHALL BE TAPPED AND DRILLED FOR 5/16" ZINC-PLATED ALLEN-TYPE SET SCREWS HAVING SELF-LOCKING SAW-TOOTH ENDS.
8. FASTENERS: ALL STEEL FASTENERS FOR TRAFFIC CONTROL SIGNS SHALL BE GALVANIZED AND SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 1614 OF THE STANDARD SPECIFICATIONS.
9. REFLECTIVE SHEETING: REFLECTIVE SHEETING SHALL BE TYPE III, HIGH-INTENSITY TYPE.
10. PROCESS INK: ALL PROCESS INK SHALL CONFORM TO THE REQUIREMENTS OF SUBSECTION 2202 OF THE STANDARD SPECIFICATIONS.
11. DETAILS: REGULATORY AND WARNING SIGNS SHALL CONFORM TO THE DETAILS IN "STANDARD HIGHWAY SIGNS", FHWA, 1979.
12. DETAILS - SNS: THE REFLECTIVE SHEETING FOR THE 6 3/4" STANDARD SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGOUND WITH SILVER-WHITE #2 COPY WITH 4" UPPER CASE AND LOWER CASE PRIMARY COPY AND SUFFIX COPY. BOTH SERIES "C". FACES TO TRIM TO A 6 1/4". (SEE DETAIL A.)

    THE REFLECTIVE SHEETING FOR THE 9" METRO SIZE SNS IS TO BE THE HIGHWAY GREEN BACKGROUND WITH SILVERWHITE #2 COPY WITH 5" UPPER CASE AND LOWER CASE PRIMARY COPY AND SUFFIX COPY, BOTH SERIES "C". THE CARDINAL DIRECTION CENTERED DIRECTLY BELOW THE BLOCK NUMBER SHALL BE AN UPPER CASE, 4" SERIES "C" LETTER. FACES TO TRIM TO A 8 1/2" WIDTH. (SEE DETAIL B.)

    FOR CUL-DE-SAC STREETS, A 9" METRO SIZE BLADE SHALL BE USED WITH THE HOUSE NUMBERS DISPLAYED BENEATH THE STREET NAME. LETTERING TO BE THE SAME AS FOR THE 6 3/4" SIZE BLADE, EXCEPT THAT THE HOUSE NUMBER INFORMATION SHALL BE 4" SERIES "C".

    SHOP DRAWINGS OF LAYOUT FOR SNS SHALL BE SUBMITTED TO THE TRAFFIC ENGINEERING DIVISION OF THE CITY OF WICHITA FOR APPROVAL PRIOR TO FABRICATION. THE FINISHED SIGNS AS SUPPLILED SHALL BE OF GOOD APPEARANCE, FREE FROM RAGGED EDGES, CRACKS SCALES OR BLISTERS AND SHALL BE CLEAN-CUT. SIGNS SHALL BE PACKED IN SUCH MANNER AS TO PREVENT DAMAGE OR DEFACEMENT DURING SHIPMENT OR STORAGE.
13. PERMANENT TRAFFIC CONTROL AND SNS: PERMANENT TRAFFIC CONTROL AND SNS SHALL BE MEASURED AND PAID FOR AT THE LUMP SUM PRICE FOR SIGNING. THE PAYMENT AS SET FORTH ABOVE SHALL BE CONSIDERED FULL COMPENSATION FOR ALL EXCAVATION, BACKFILLING. POSTS, ANCHORS, FASTENERS, MATERIALS, LABOR, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK.

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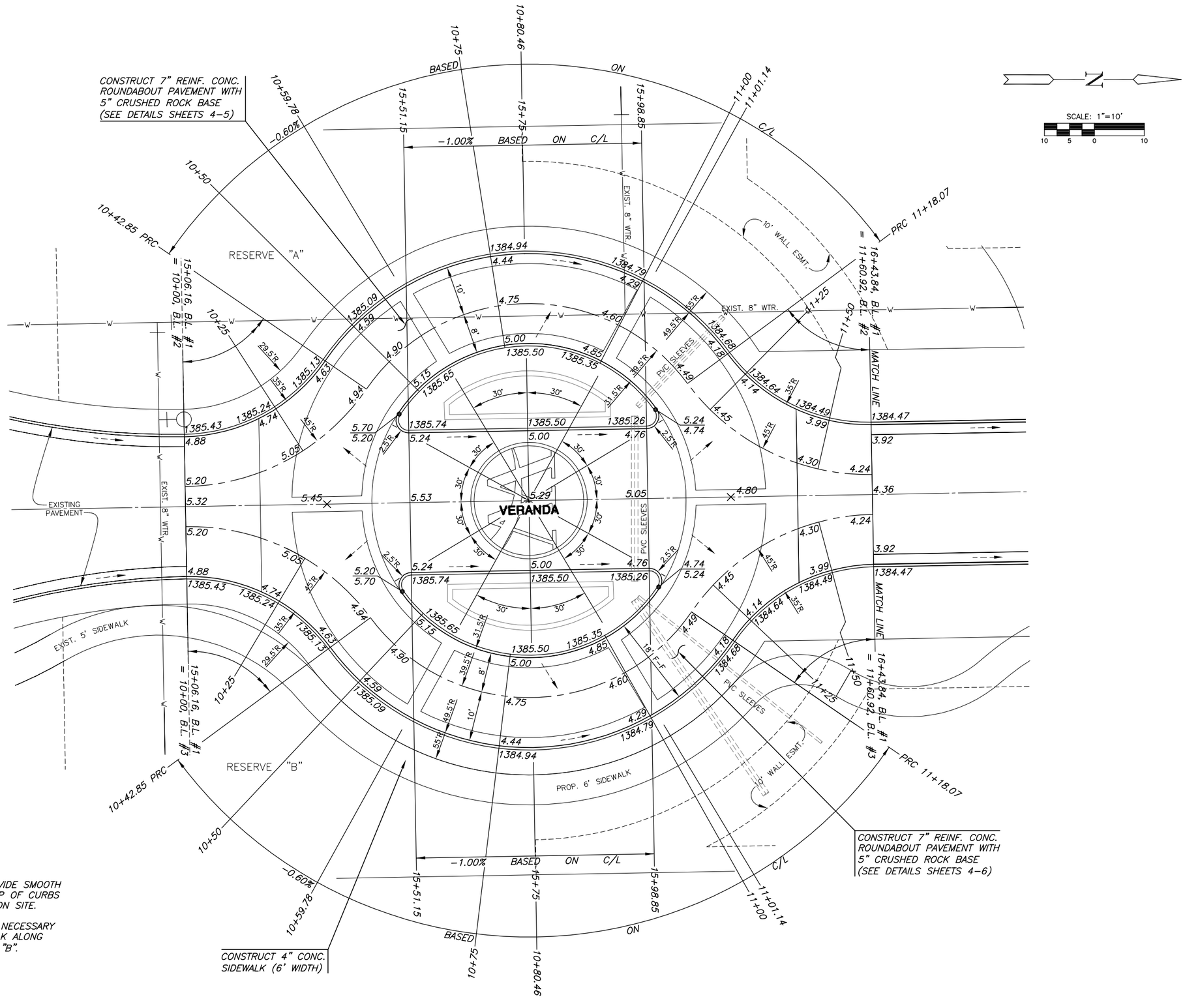
SIGNING DETAILS

SCALE: NONE	APPROVED BY	DATE: JULY '03
DRAWN BY: TM		REVISED: OCT 2002

CITY OF WICHITA
DEPARTMENT OF PUBLIC WORKS
SCOTT LOGAN, TRAFFIC ENGINEER, ENGINEERING DIVISION



NOTES:

1. THE CONTRACTOR SHALL PROVIDE SMOOTH GRADE TRANSITIONS FROM TOP OF CURBS TO EXISTING BERM GRADING ON SITE.
2. SOME FINE GRADING MAY BE NECESSARY WHEN CONSTRUCTING SIDEWALK ALONG EXISTING BERMS IN RESERVE "B".

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
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PAVING AND INCIDENTAL DRAINAGE PLANS FOR

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VERANDA ROUNDABOUT PAVING
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GJA
CHECKED BY

ISSUED
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SHEET NO.
10 of 33

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CURVE TABLE – C1

△ = 26°26'18" R = 600.00' T = 140.94' L = 276.86' LC = 274.41'

CURVE DATA BASED ON CENTERLINE △ /2 = 13°13'09"

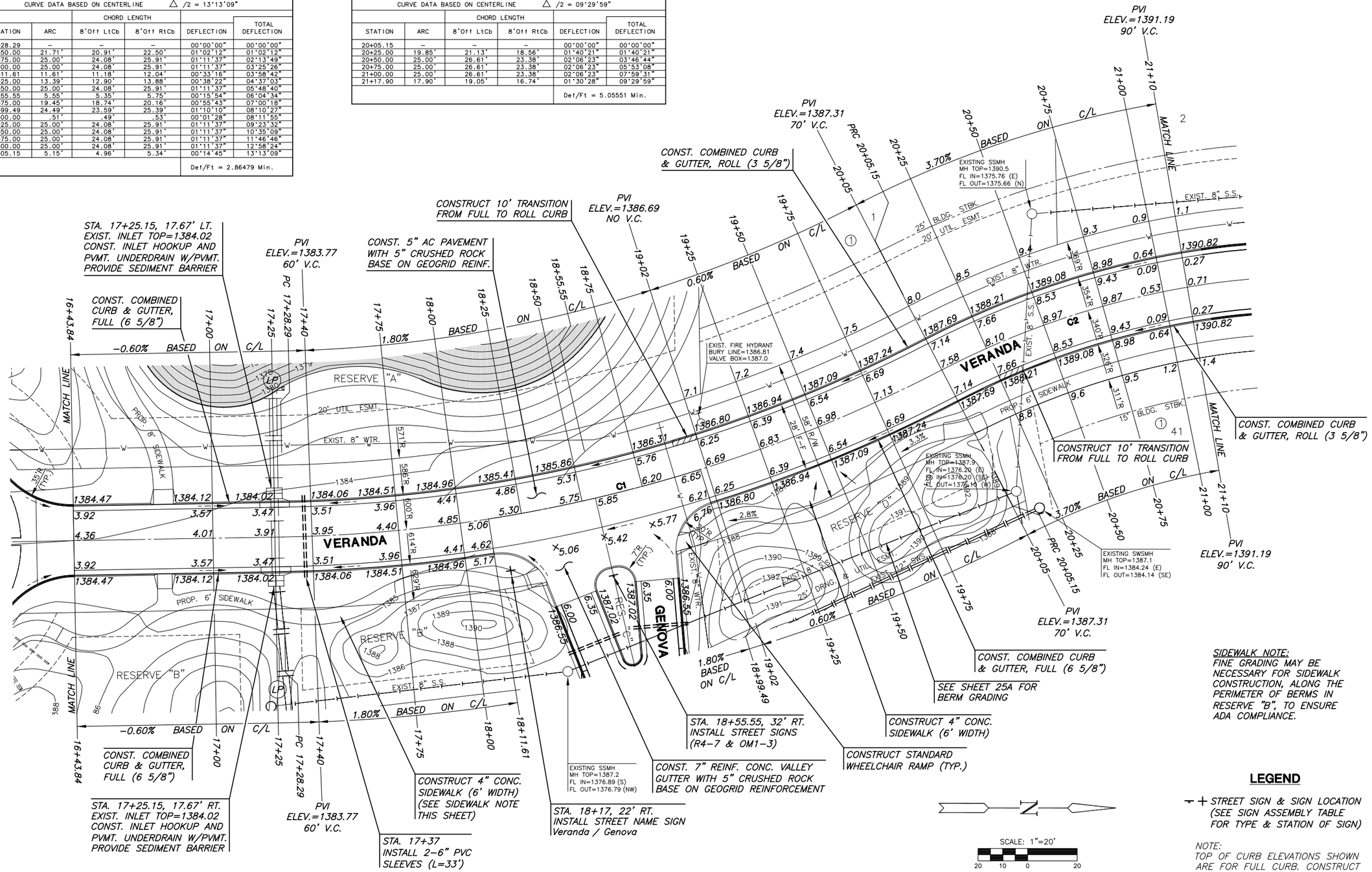
STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
17+28.29	–	–	–	00°00'00"	00°00'00"
17+50.00	21.71'	20.91'	22.50'	01°02'12"	01°02'12"
17+75.00	25.00'	24.08'	25.91'	01°11'37"	02°13'49"
18+00.00	25.00'	24.08'	25.91'	01°11'37"	03°25'26"
18+11.61	11.61'	11.18'	12.04'	00°33'16"	03°58'42"
18+25.00	13.39'	12.90'	13.88'	00°38'22"	04°37'03"
18+50.00	25.00'	24.08'	25.91'	01°11'37"	05°48'40"
18+55.55	5.55'	5.35'	5.75'	00°15'54"	06°04'34"
18+75.00	19.45'	18.74'	20.16'	00°55'43"	07°00'18"
18+99.49	24.49'	23.59'	25.39'	01°10'10"	08°10'27"
19+00.00	.51'	.49'	.53'	00°01'28"	08°11'55"
19+25.00	25.00'	24.08'	25.91'	01°11'37"	09°23'32"
19+50.00	25.00'	24.08'	25.91'	01°11'37"	10°35'09"
19+75.00	25.00'	24.08'	25.91'	01°11'37"	11°46'46"
20+00.00	25.00'	24.08'	25.91'	01°11'37"	12°58'24"
20+05.15	5.15'	4.96'	5.34'	00°14'45"	13°13'09"
				Def/Ft = 2.86479 Min.	

CURVE TABLE – C2

△ = 18°59'59" R = 340.00' T = 56.90' L = 112.75' LC = 112.23'

CURVE DATA BASED ON CENTERLINE △ /2 = 09°29'59"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
20+05.15	–	–	–	00°00'00"	00°00'00"
20+25.00	19.85'	21.13'	18.56'	01°40'21"	01°40'21"
20+50.00	25.00'	26.61'	23.38'	02°06'23"	03°46'44"
20+75.00	25.00'	26.61'	23.38'	02°06'23"	05°53'08"
21+00.00	25.00'	26.61'	23.38'	02°06'23"	07°59'31"
21+17.90	17.90'	19.05'	16.74'	01°30'28"	09°29'59"
				Def/Ft = 5.05551 Min.	



SIDEWALK NOTE:
FINE GRADING MAY BE NECESSARY FOR SIDEWALK CONSTRUCTION, ALONG THE PERIMETER OF BERMS IN RESERVE "B", TO ENSURE ADA COMPLIANCE.

LEGEND

STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

NOTE:
TOP OF CURB ELEVATIONS SHOWN ARE FOR FULL CURB. CONSTRUCT CURB AND GUTTER AS NOTED.

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR THE WATERFRONT RESIDENTIAL ADDITION

VERANDA PAVING
SHEET TITLE

PPP #188
PROJECT NUMBER

DFL
DESIGN BY

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11 of 33

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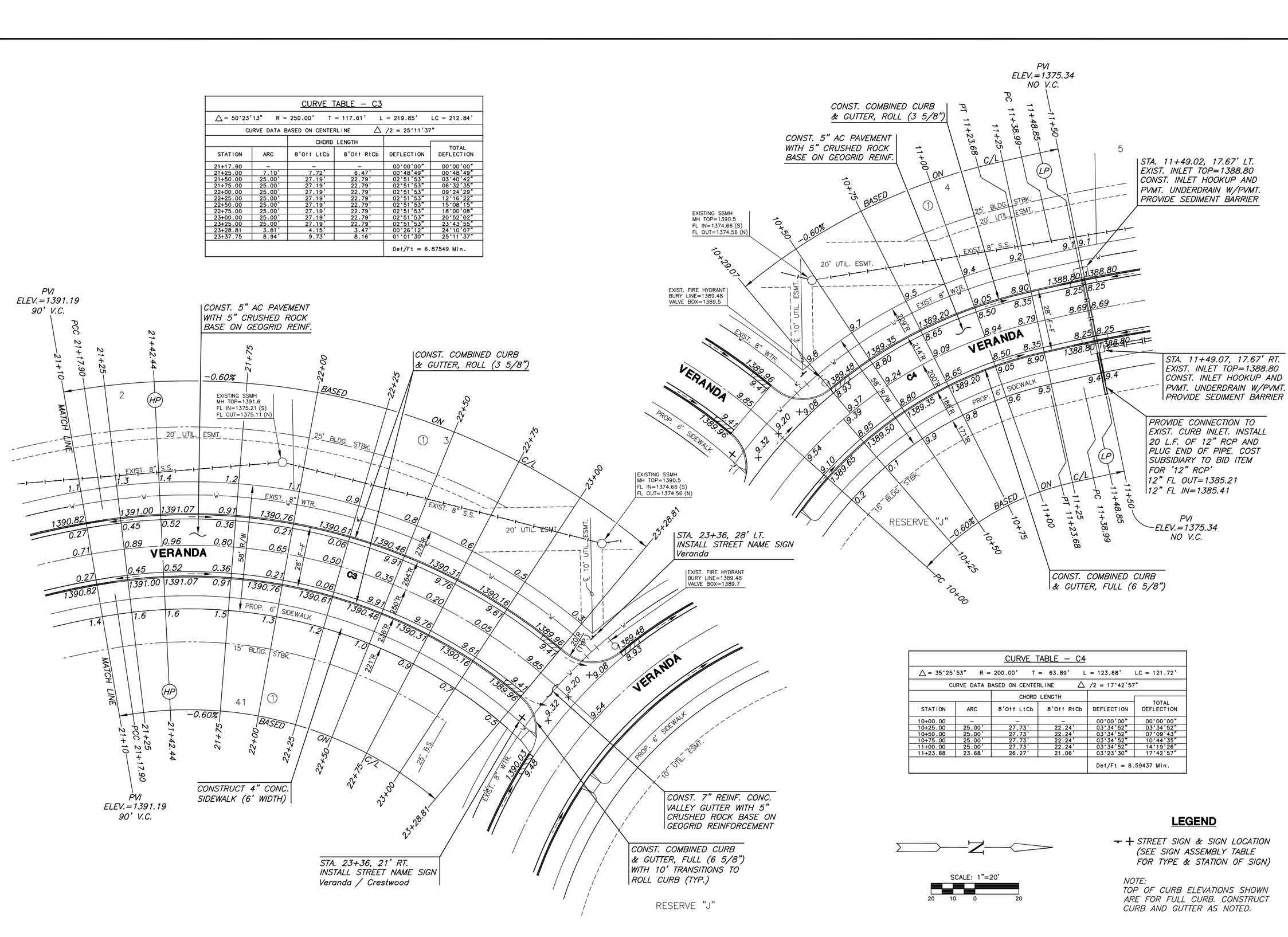
CURVE TABLE – C3					
△ = 50°23'13" R = 250.00' T = 117.61' L = 219.85' LC = 212.84'					
CURVE DATA BASED ON CENTERLINE △ /2 = 25°11'37"					
		CHORD LENGTH			
STATION	ARC	8'Off LtCb	8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
21+17.90	–	–	–	00°00'00"	00°00'00"
21+25.00	7.10'	7.72'	6.47'	00°48'49"	00°48'49"
21+50.00	25.00'	27.19'	22.79'	02°51'53"	03°40'42"
21+75.00	25.00'	27.19'	22.79'	02°51'53"	06°32'35"
22+00.00	25.00'	27.19'	22.79'	02°51'53"	09°24'29"
22+25.00	25.00'	27.19'	22.79'	02°51'53"	12°16'22"
22+50.00	25.00'	27.19'	22.79'	02°51'53"	15°08'15"
22+75.00	25.00'	27.19'	22.79'	02°51'53"	18°00'08"
23+00.00	25.00'	27.19'	22.79'	02°51'53"	20°52'02"
23+25.00	25.00'	27.19'	22.79'	02°51'53"	23°43'55"
23+28.81	3.81'	4.15'	3.47'	00°26'12"	24°10'07"
23+37.75	8.94'	9.73'	8.16'	01°01'30"	25°11'37"
				Def/Ft = 6.87549 Min.	



CURVE TABLE – C4					
△ = 35°25'53" R = 200.00' T = 63.89' L = 123.68' LC = 121.72'					
CURVE DATA BASED ON CENTERLINE △ /2 = 17°42'57"					
		CHORD LENGTH			
STATION	ARC	8'Off LtCb	8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
10+00.00	–	–	–	00°00'00"	00°00'00"
10+25.00	25.00'	27.73'	22.24'	03°34'52"	03°34'52"
10+50.00	25.00'	27.73'	22.24'	03°34'52"	07°09'43"
10+75.00	25.00'	27.73'	22.24'	03°34'52"	10°44'35"
11+00.00	25.00'	27.73'	22.24'	03°34'52"	14°19'26"
11+23.68	23.68'	26.27'	21.06'	03°23'30"	17°42'57"
				Def/Ft = 8.59437 Min.	

LEGEND

+ STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

NOTE:
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SCALE: 1"=20'

20 10 0 20

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PAVING AND INCIDENTAL DRAINAGE PLANS FOR

THE WATERFRONT RESIDENTIAL ADDITION

VERANDA PAVING
SHEET TITLE

PPP #188
PROJECT NUMBER

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12 of 33

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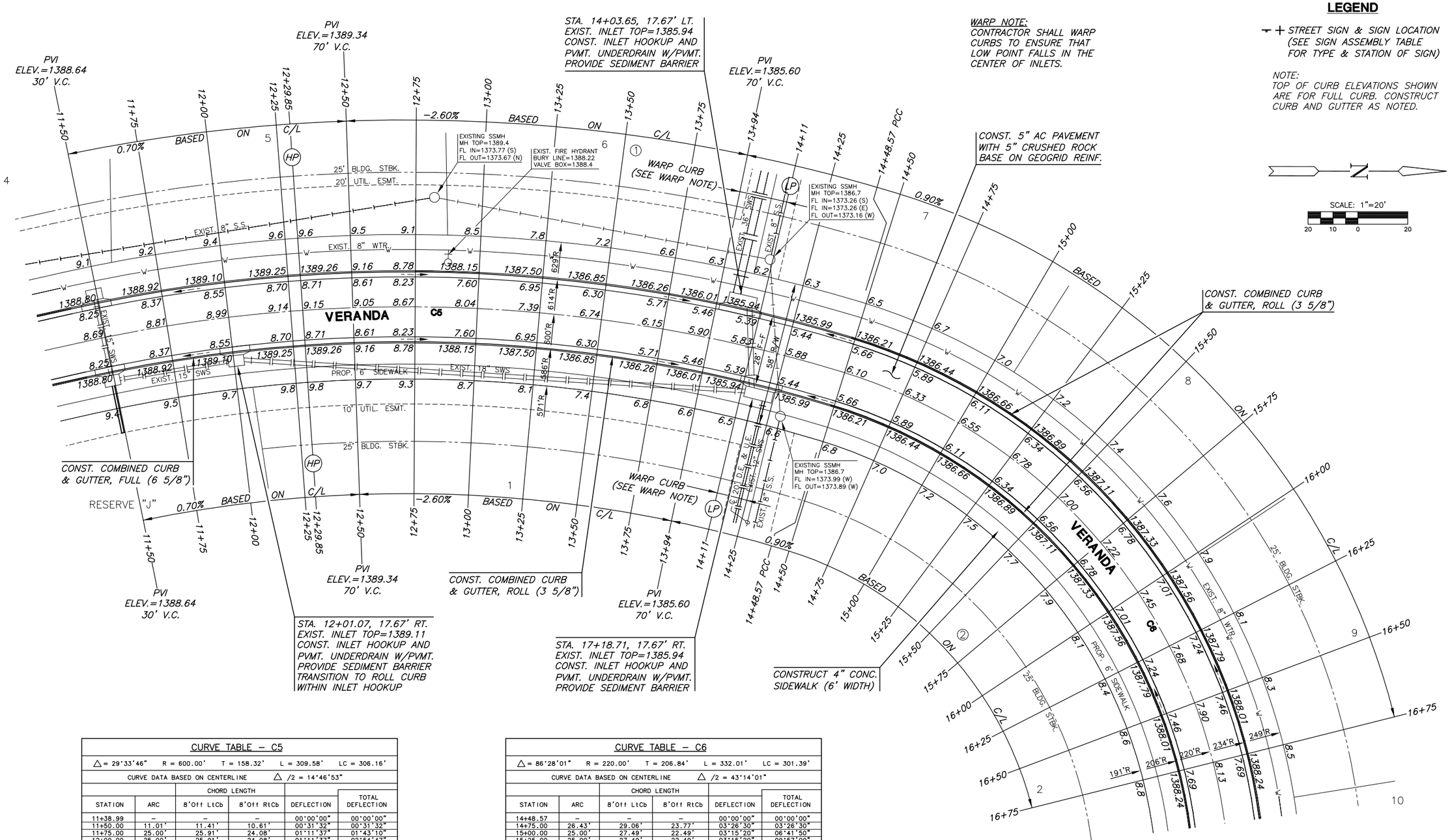

LEGEND

STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

NOTE:
TOP OF CURB ELEVATIONS SHOWN ARE FOR FULL CURB. CONSTRUCT CURB AND GUTTER AS NOTED.

CURVE TABLE – C5

$\triangle$ = 29°33'46" R = 600.00' T = 158.32' L = 309.58' LC = 306.16'

CURVE DATA BASED ON CENTERLINE $\triangle$ /2 = 14°46'53"

		CHORD LENGTH			
STATION	ARC	8'Off LtCb	8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
11+38.99	–	–	–	00°00'00"	00°00'00"
11+50.00	11.01'	11.41'	10.61'	00°31'32"	00°31'32"
11+75.00	25.00'	25.91'	24.08'	01°11'37"	01°43'10"
12+00.00	25.00'	25.91'	24.08'	01°11'37"	02°54'47"
12+25.00	25.00'	25.91'	24.08'	01°11'37"	04°06'24"
12+50.00	25.00'	25.91'	24.08'	01°11'37"	05°18'01"
12+75.00	25.00'	25.91'	24.08'	01°11'37"	06°29'38"
13+00.00	25.00'	25.91'	24.08'	01°11'37"	07°41'16"
13+25.00	25.00'	25.91'	24.08'	01°11'37"	08°52'53"
13+50.00	25.00'	25.91'	24.08'	01°11'37"	10°04'30"
13+75.00	25.00'	25.91'	24.08'	01°11'37"	11°16'07"
14+00.00	25.00'	25.91'	24.08'	01°11'37"	12°27'44"
14+25.00	25.00'	25.91'	24.08'	01°11'37"	13°39'21"
14+48.57	23.57'	24.43'	22.70'	01°07'32"	14°46'53"
				Def/Ft = 2.86479 Min.	

CURVE TABLE – C6

$\triangle$ = 86°28'01" R = 220.00' T = 206.84' L = 332.01' LC = 301.39'

CURVE DATA BASED ON CENTERLINE $\triangle$ /2 = 43°14'01"

		CHORD LENGTH			
STATION	ARC	8'Off LtCb	8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
14+48.57	–	–	–	00°00'00"	00°00'00"
14+75.00	26.43'	29.06'	23.77'	03°26'30"	03°26'30"
15+00.00	25.00'	27.49'	22.49'	03°15'20"	06°41'50"
15+25.00	25.00'	27.49'	22.49'	03°15'20"	09°57'09"
15+50.00	25.00'	27.49'	22.49'	03°15'20"	13°12'29"
15+75.00	25.00'	27.49'	22.49'	03°15'20"	16°27'48"
16+00.00	25.00'	27.49'	22.49'	03°15'20"	19°43'08"
16+25.00	25.00'	27.49'	22.49'	03°15'20"	22°58'27"
16+50.00	25.00'	27.49'	22.49'	03°15'20"	26°13'47"
16+75.00	25.00'	27.49'	22.49'	03°15'20"	29°29'07"
17+00.00	25.00'	27.49'	22.49'	03°15'20"	32°44'26"
17+25.00	25.00'	27.49'	22.49'	03°15'20"	35°59'46"
17+50.00	25.00'	27.49'	22.49'	03°15'20"	39°15'05"
17+75.00	25.00'	27.49'	22.49'	03°15'20"	42°30'25"
17+80.58	5.58'	6.14'	5.02'	00°43'35"	43°14'00"
				Def/Ft = 7.81306 Min.	

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PAVING AND INCIDENTAL DRAINAGE PLANS FOR

THE WATERFRONT RESIDENTIAL ADDITION

VERANDA PAVING
SHEET TITLE

PPP #188
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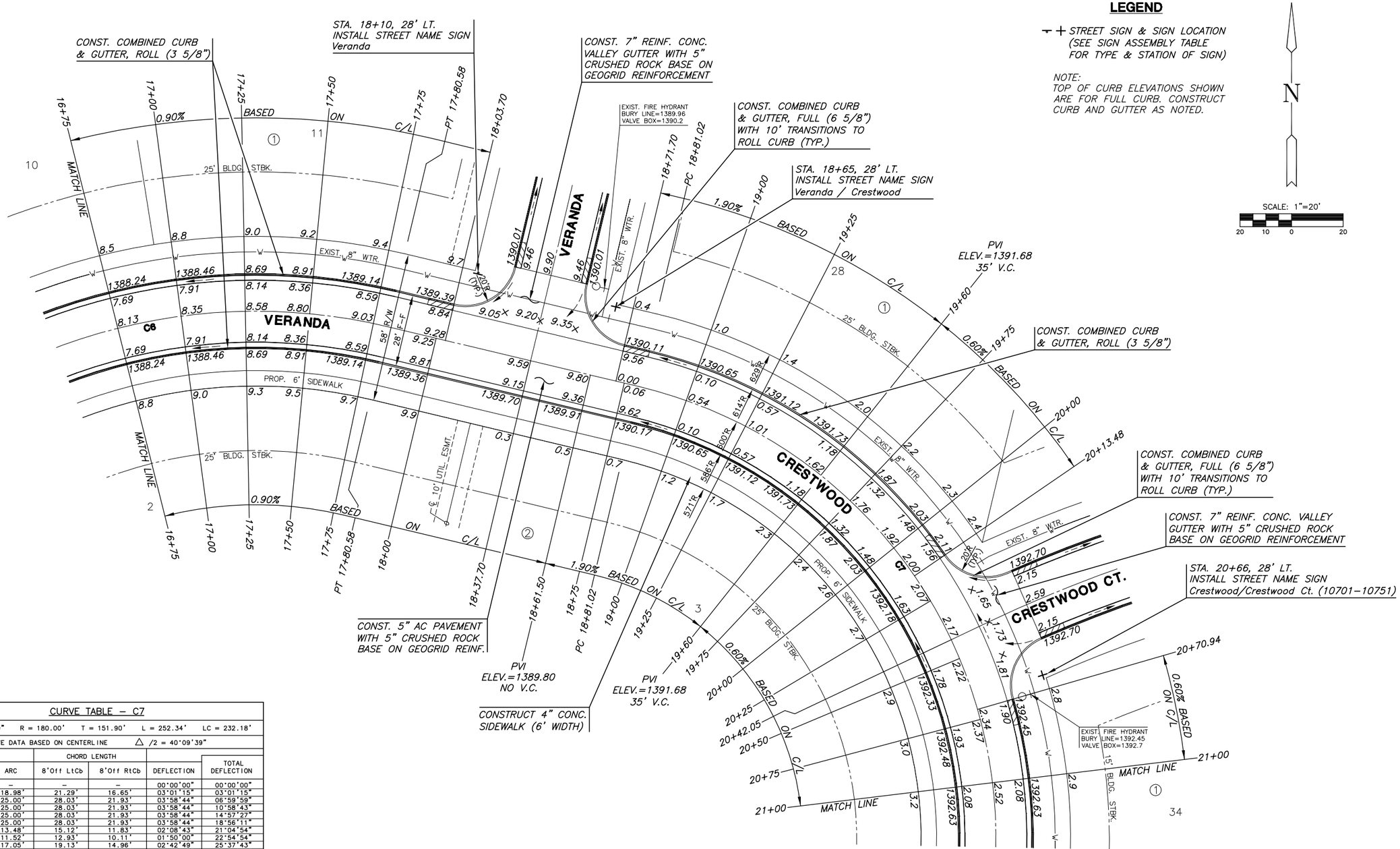
SHEET NO.
13 of 33



CURVE TABLE – C7

△ = 80°19'19" R = 180.00' T = 151.90' L = 252.34' LC = 232.18'

CURVE DATA BASED ON CENTERLINE △ /2 = 40°09'39"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
18+81.02	–	–	–	00°00'00"	00°00'00"
19+00.00	18.98'	21.29'	16.65'	03°01'15"	03°01'15"
19+25.00	25.00'	28.03'	21.93'	03°58'44"	06°59'59"
19+50.00	25.00'	28.03'	21.93'	03°58'44"	10°58'43"
19+75.00	25.00'	28.03'	21.93'	03°58'44"	14°57'27"
20+00.00	25.00'	28.03'	21.93'	03°58'44"	18°56'11"
20+13.48	13.48'	15.12'	11.83'	02°08'43"	21°04'54"
20+25.00	11.52'	12.93'	10.11'	01°50'00"	22°54'54"
20+42.05	17.05'	19.13'	14.96'	02°42'49"	25°37'43"
20+50.00	7.95'	8.92'	6.98'	01°15'55"	26°53'38"
20+70.94	20.94'	23.49'	18.37'	03°19'58"	30°13'36"
20+75.00	4.06'	4.56'	3.56'	00°38'46"	30°52'22"
21+00.00	25.00'	28.03'	21.93'	03°58'44"	34°51'06"
21+25.00	25.00'	28.03'	21.93'	03°58'44"	38°49'50"
21+33.36	8.36'	9.38'	7.34'	01°19'49"	40°09'40"
				Def/Ft = 9.54930 Min.	

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PAVING AND INCIDENTAL DRAINAGE PLANS FOR

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VERANDA & CRESTWOOD PAVING
SHEET TITLE

PPP #188
PROJECT NUMBER

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14 of 33

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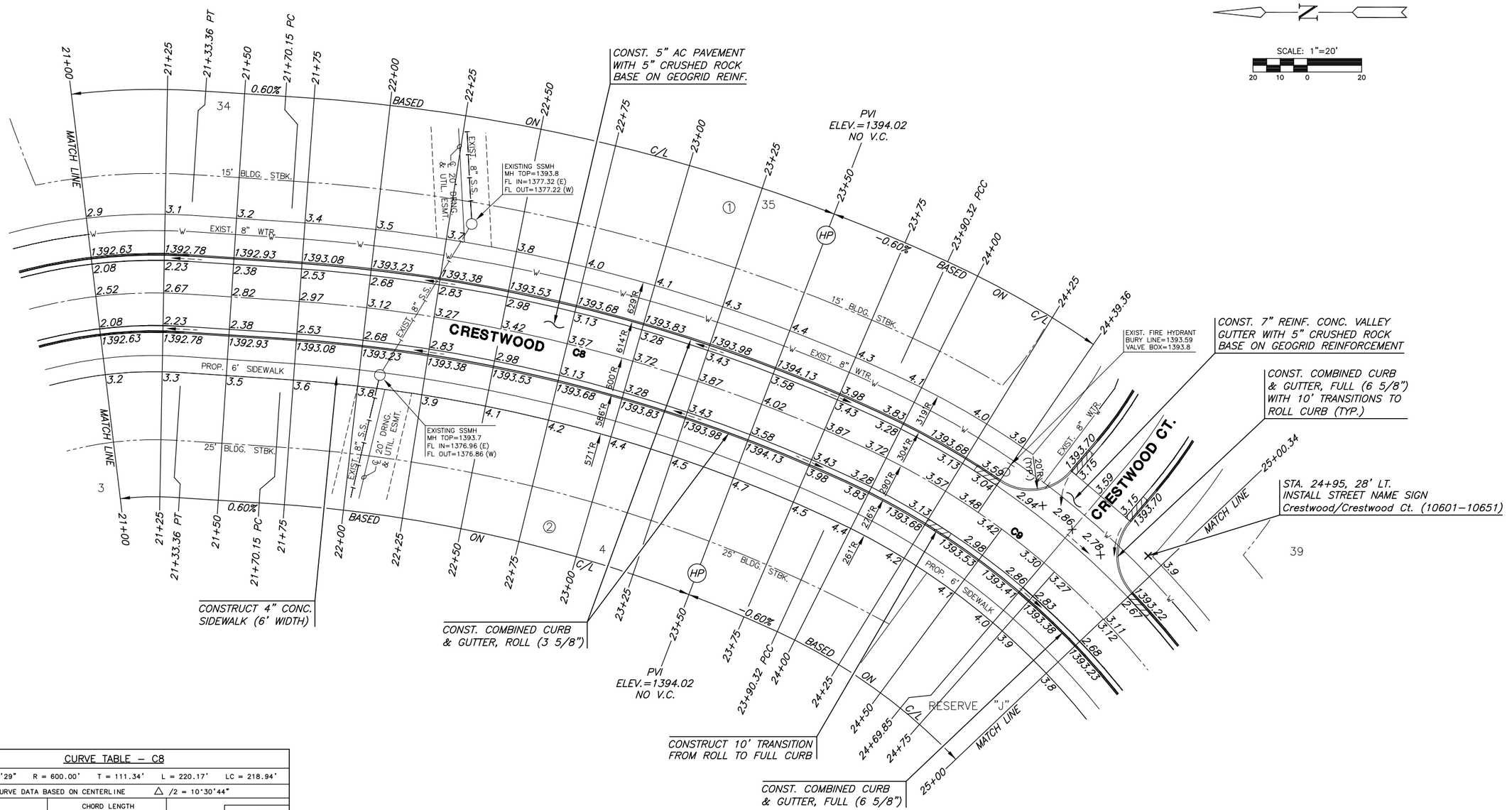

CURVE TABLE – C8					
△ = 21°01'29" R = 600.00' T = 111.34' L = 220.17' LC = 218.94'					
CURVE DATA BASED ON CENTERLINE △/2 = 10°30'44"					
		CHORD LENGTH			
STATION	ARC	8'Off LtCb	8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
21+70.15	–	–	–	00°00'00"	00°00'00"
22+00.00	29.85'	30.94'	28.75'	01°25'31"	01°25'31"
22+25.00	25.00'	25.91'	24.08'	01°11'37"	02°37'08"
22+50.00	25.00'	25.91'	24.08'	01°11'37"	03°48'45"
22+75.00	25.00'	25.91'	24.08'	01°11'37"	05°00'22"
23+00.00	25.00'	25.91'	24.08'	01°11'37"	06°12'00"
23+25.00	25.00'	25.91'	24.08'	01°11'37"	07°23'37"
23+50.00	25.00'	25.91'	24.08'	01°11'37"	08°35'14"
23+75.00	25.00'	25.91'	24.08'	01°11'37"	09°46'51"
23+90.32	15.32'	15.88'	14.76'	00°43'53"	10°30'45"
				Def/Ft = 2.86479 Min.	

LEGEND

+ + STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

NOTE:
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PAVING AND INCIDENTAL DRAINAGE PLANS FOR

THE WATERFRONT RESIDENTIAL ADDITION

CRESTWOOD PAVING
SHEET TITLE

PPP #188
PROJECT NUMBER

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15 of 33

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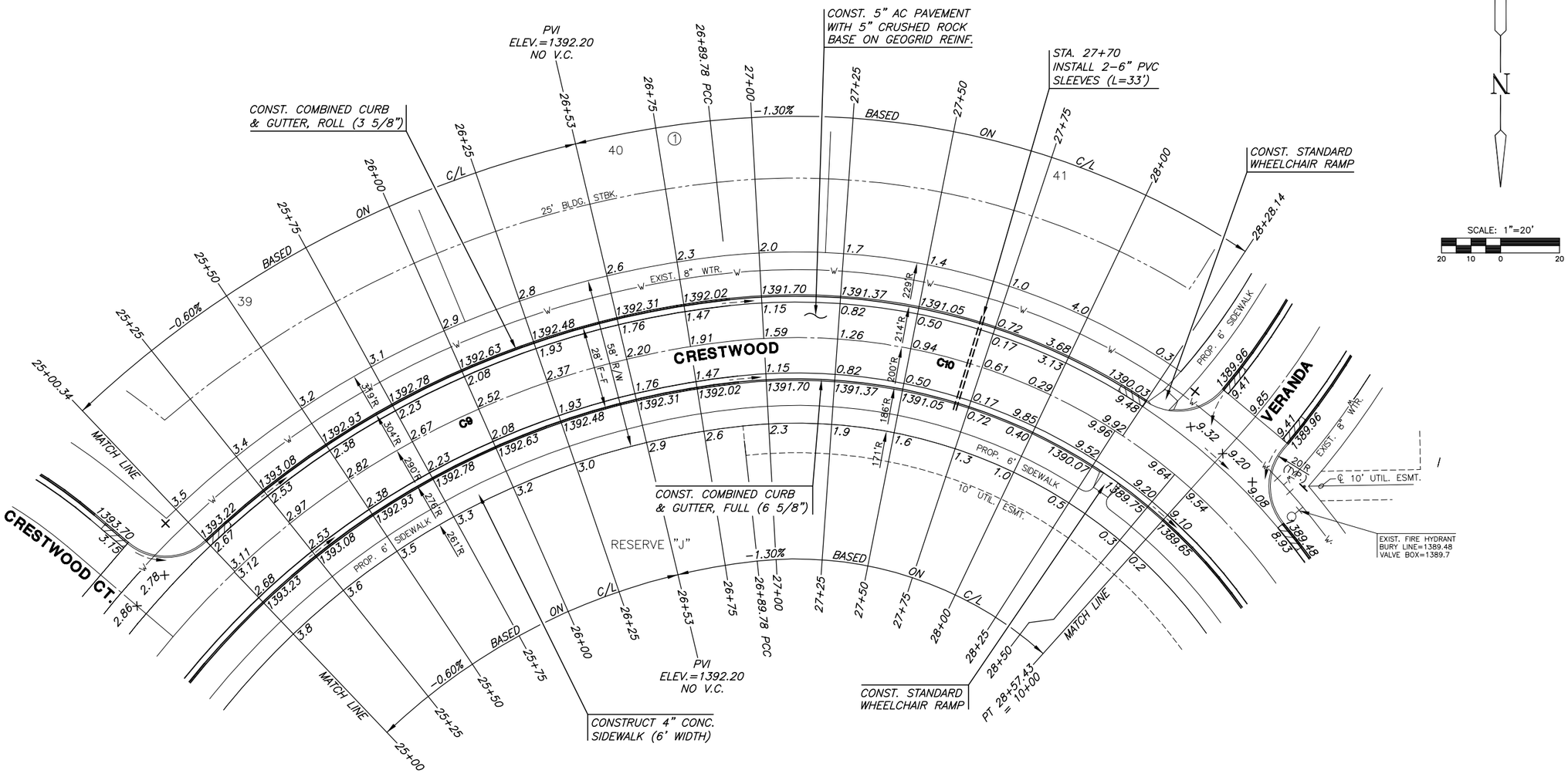

CURVE TABLE – C9

△ = 59°09'50" R = 290.00' T = 164.62' L = 299.46' LC = 286.33'

CURVE DATA BASED ON CENTERLINE △/2 = 29°34'55"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
23+90.32	–	–	–	00°00'00"	00°00'00"
24+00.00	9.68'	10.41'	8.95'	00°57'22"	00°57'22"
24+25.00	25.00'	26.89'	23.10'	02°28'11"	03°25'33"
24+39.36	14.36'	15.45'	13.27'	01°25'07"	04°50'40"
24+50.00	10.64'	11.45'	9.83'	01°03'04"	05°53'44"
24+89.85	19.85'	21.35'	18.34'	01°57'39"	07°51'23"
24+75.00	5.15'	5.54'	4.76'	00°30'31"	08°21'55"
25+00.00	25.00'	26.89'	23.10'	02°28'11"	10°50'05"
25+00.34	.34'	.37'	.31'	00°02'01"	10°52'06"
25+25.00	24.66'	26.52'	22.78'	02°26'10"	13°18'16"
25+50.00	25.00'	26.89'	23.10'	02°28'11"	15°46'27"
25+75.00	25.00'	26.89'	23.10'	02°28'11"	18°14'38"
26+00.00	25.00'	26.89'	23.10'	02°28'11"	20°42'48"
26+25.00	25.00'	26.89'	23.10'	02°28'11"	23°10'59"
26+50.00	25.00'	26.89'	23.10'	02°28'11"	25°39'10"
26+75.00	25.00'	26.89'	23.10'	02°28'11"	28°07'20"
26+89.78	14.78'	15.89'	13.65'	01°27'35"	29°34'55"
				Def/Ft = 5.92715 Min.	

CURVE TABLE – C10

△ = 48°01'42" R = 200.00' T = 89.10' L = 167.65' LC = 162.79'

CURVE DATA BASED ON CENTERLINE △/2 = 24°00'51"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
26+89.78	–	–	–	00°00'00"	00°00'00"
27+00.00	10.22'	11.34'	9.09'	01°27'50"	01°27'50"
27+25.00	25.00'	27.73'	22.24'	03°34'52"	05°02'42"
27+50.00	25.00'	27.73'	22.24'	03°34'52"	08°37'33"
27+75.00	25.00'	27.73'	22.24'	03°34'52"	12°12'25"
28+00.00	25.00'	27.73'	22.24'	03°34'52"	15°47'16"
28+25.00	25.00'	27.73'	22.24'	03°34'52"	19°22'08"
28+50.00	25.00'	27.73'	22.24'	03°34'52"	22°56'59"
28+57.43	7.43'	8.25'	6.61'	01°03'52"	24°00'51"
				Def/Ft = 8.59437 Min.	

LEGEND

-+- STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

NOTE:
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PAVING AND INCIDENTAL DRAINAGE PLANS FOR THE WATERFRONT RESIDENTIAL ADDITION

CRESTWOOD PAVING
SHEET TITLE

PPP #188
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16 of 33

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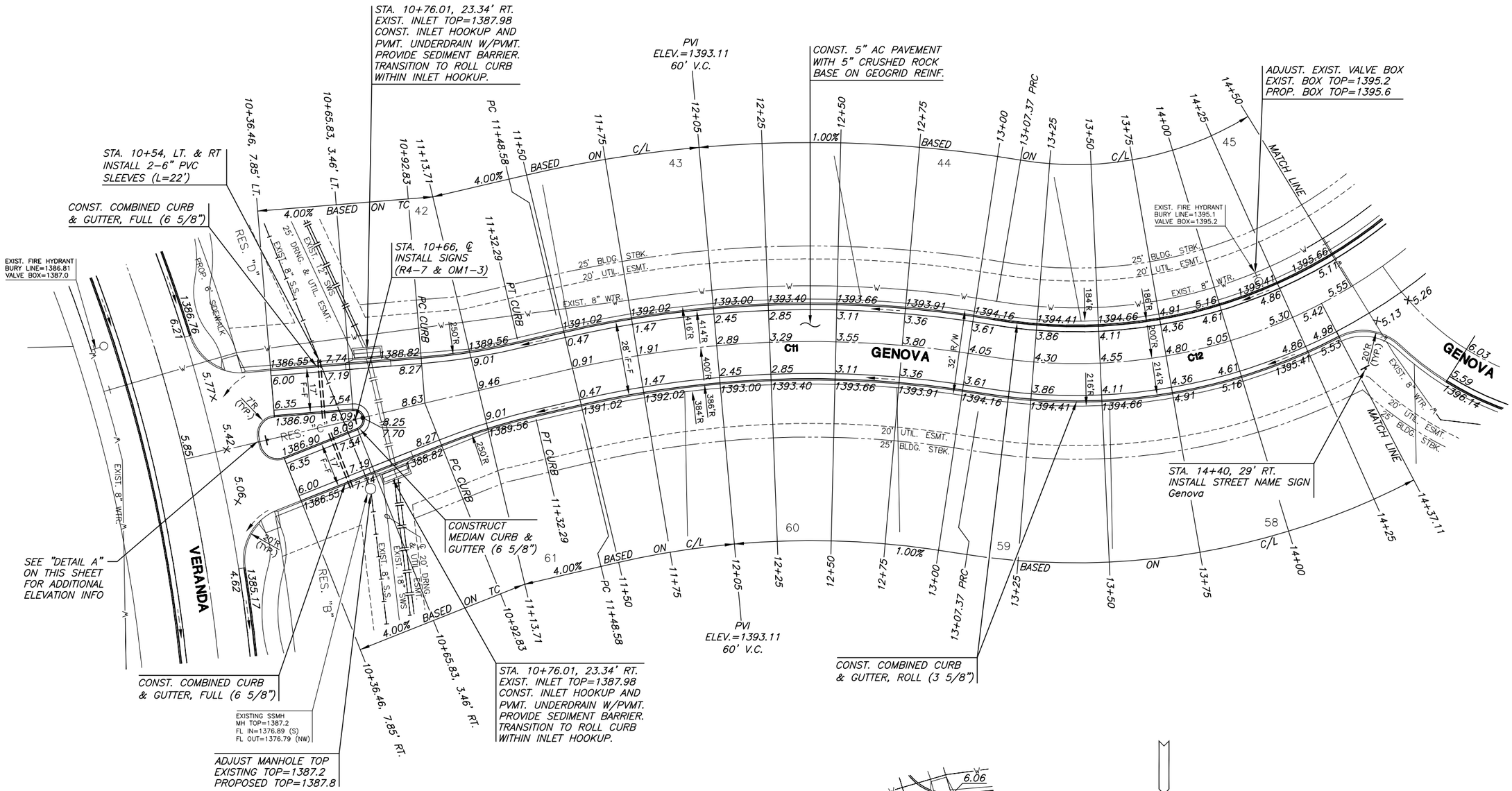


CURVE TABLE – C11

△ = 22°44'44" R = 400.00' T = 80.46' L = 158.79' LC = 157.75'

CURVE DATA BASED ON CENTERLINE △ /2 = 11°22'22"

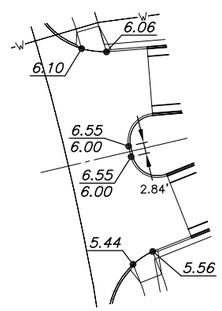
STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
11+48.58	–	–	–	00°00'00"	00°00'00"
11+75.00	26.42'	27.87'	24.96'	01°53'32"	01°53'32"
12+00.00	25.00'	26.37'	23.62'	01°47'26"	03°40'58"
12+25.00	25.00'	26.37'	23.62'	01°47'26"	05°28'23"
12+50.00	25.00'	26.37'	23.62'	01°47'26"	07°15'49"
12+75.00	25.00'	26.37'	23.62'	01°47'26"	09°03'15"
13+00.00	25.00'	26.37'	23.62'	01°47'26"	10°50'41"
13+07.37	7.37'	7.78'	6.97'	00°31'41"	11°22'22"
				Def/Ft = 4.29718 Min.	

CURVE TABLE – C12

△ = 67°43'34" R = 200.00' T = 134.21' L = 236.41' LC = 222.88'

CURVE DATA BASED ON CENTERLINE △ /2 = 33°51'47"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
13+07.37	–	–	–	00°00'00"	00°00'00"
13+25.00	17.63'	15.69'	19.56'	02°31'31"	02°31'31"
13+50.00	25.00'	22.24'	27.73'	03°34'52"	06°06'23"
13+75.00	25.00'	22.24'	27.73'	03°34'52"	09°41'14"
14+00.00	25.00'	22.24'	27.73'	03°34'52"	13°16'06"
14+25.00	25.00'	22.24'	27.73'	03°34'52"	16°50'57"
14+50.00	25.00'	22.24'	27.73'	03°34'52"	20°25'49"
14+75.00	25.00'	22.24'	27.73'	03°34'52"	24°00'40"
15+00.00	25.00'	22.24'	27.73'	03°34'52"	27°35'32"
15+25.00	25.00'	22.24'	27.73'	03°34'52"	31°10'24"
15+43.78	18.78'	16.71'	20.84'	02°41'23"	33°51'47"
				Def/Ft = 8.59437 Min.	



DETAIL A

LEGEND

+ STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

NOTE:
TOP OF CURB ELEVATIONS SHOWN ARE FOR FULL CURB. CONSTRUCT CURB AND GUTTER AS NOTED.

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR THE WATERFRONT RESIDENTIAL ADDITION

GENOVA PAVING
SHEET TITLE

PPP #188
PROJECT NUMBER

DFL
DESIGN BY

DMU
DRAWN BY

GJA
CHECKED BY

ISSUED
May 2008

REVISED

SHEET NO.
17 of 33

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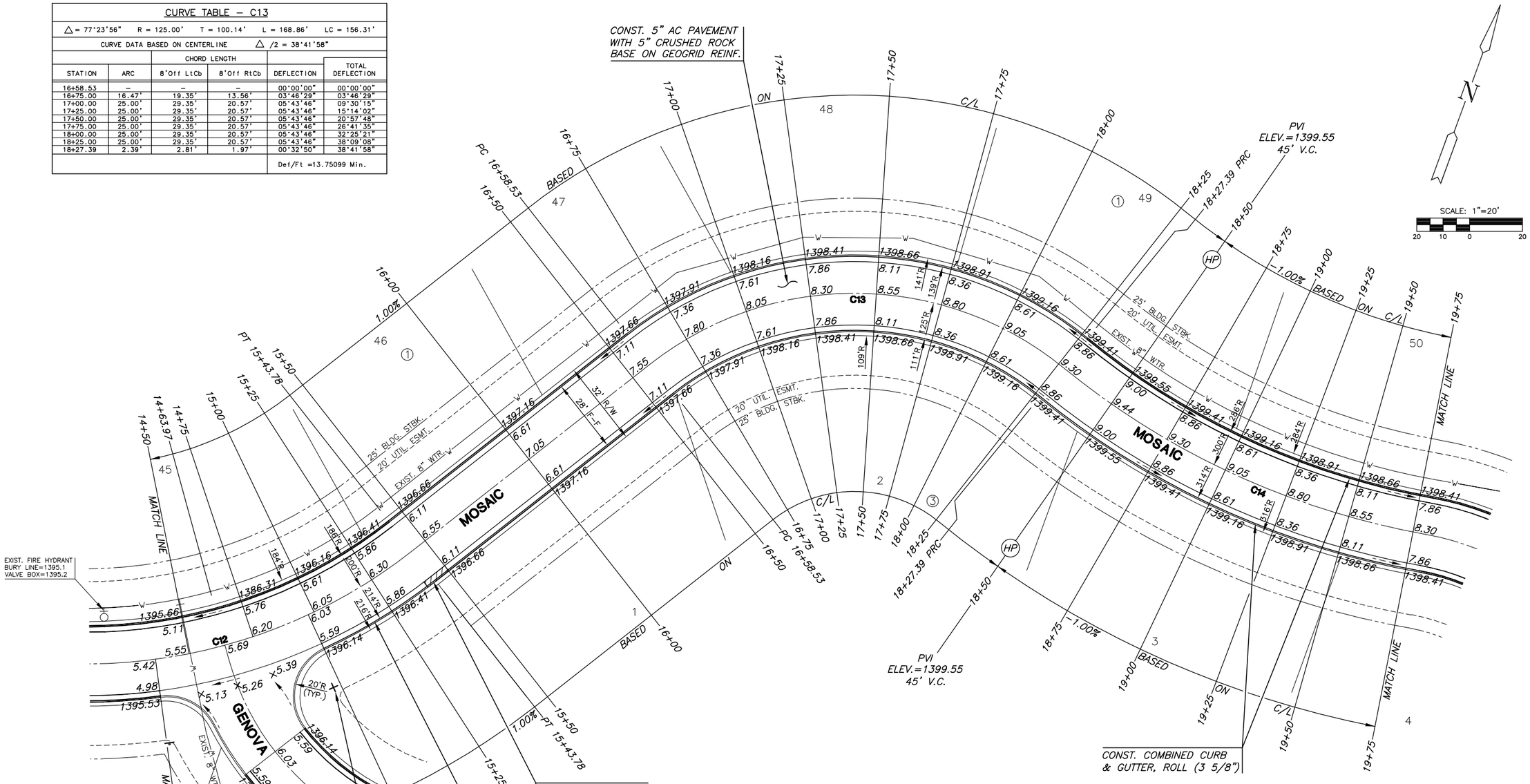
CURVE TABLE – C13					
△ = 77°23'56" R = 125.00' T = 100.14' L = 168.86' LC = 156.31'					
CURVE DATA BASED ON CENTERLINE △ /2 = 38°41'58"					
		CHORD LENGTH			
STATION	ARC	8'Off LtCb	8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
16+58.53	–	–	–	00°00'00"	00°00'00"
16+75.00	16.47'	19.35'	13.56'	03°46'29"	03°46'29"
17+00.00	25.00'	29.35'	20.57'	05°43'46"	09°30'15"
17+25.00	25.00'	29.35'	20.57'	05°43'46"	15°14'02"
17+50.00	25.00'	29.35'	20.57'	05°43'46"	20°57'48"
17+75.00	25.00'	29.35'	20.57'	05°43'46"	26°41'35"
18+00.00	25.00'	29.35'	20.57'	05°43'46"	32°25'21"
18+25.00	25.00'	29.35'	20.57'	05°43'46"	38°09'08"
18+27.39	2.39'	2.81'	1.97'	00°32'50"	38°41'58"
				Def/Ft =13.75099 Min.	



CURVE TABLE – C14					
△ = 29°07'22" R = 300.00' T = 77.93' L = 152.49' LC = 150.85'					
CURVE DATA BASED ON CENTERLINE △ /2 = 14°33'41"					
		CHORD LENGTH			
STATION	ARC	8'Off LtCb	8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
18+27.39	–	–	–	00°00'00"	00°00'00"
18+50.00	22.61'	20.95'	24.26'	02°09'33"	02°09'33"
18+75.00	25.00'	23.16'	26.83'	02°23'14"	04°32'47"
19+00.00	25.00'	23.16'	26.83'	02°23'14"	06°56'01"
19+25.00	25.00'	23.16'	26.83'	02°23'14"	09°19'16"
19+50.00	25.00'	23.16'	26.83'	02°23'14"	11°42'30"
19+75.00	25.00'	23.16'	26.83'	02°23'14"	14°05'45"
19+79.88	4.88'	4.52'	5.23'	00°27'56"	14°33'41"
				Def/Ft = 5.72958 Min.	

LEGEND

+ STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

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411 N. WEBB ROAD
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PAVING AND INCIDENTAL DRAINAGE PLANS FOR THE WATERFRONT RESIDENTIAL ADDITION

MOSAIC PAVING
SHEET TITLE

PPP #188
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18 of 33

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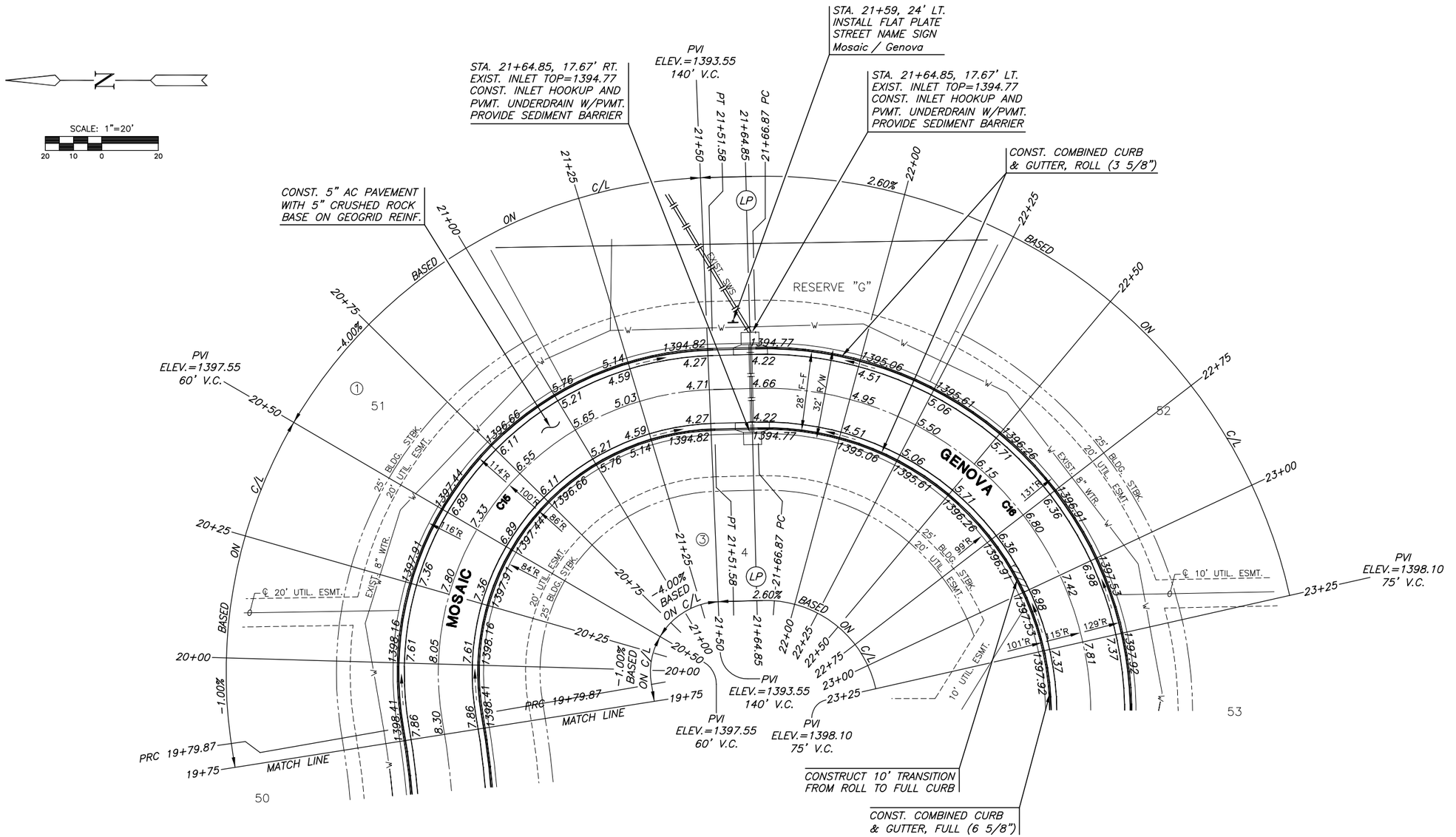

CURVE TABLE – C15					
△ = 98°22'57" R = 100.00' T = 115.82' L = 171.71' LC = 151.38'					
CURVE DATA BASED ON CENTERLINE △ /2 = 49°11'28"					
		CHORD LENGTH			
STATION	ARC	8'Off LtCb	8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
19+79.87	–	–	–	00°00'00"	00°00'00"
20+00.00	20.13'	24.52'	15.67'	05°46'01"	05°46'01"
20+25.00	25.00'	30.42'	19.45'	07°09'43"	12°55'44"
20+50.00	25.00'	30.42'	19.45'	07°09'43"	20°05'27"
20+75.00	25.00'	30.42'	19.45'	07°09'43"	27°15'10"
21+00.00	25.00'	30.42'	19.45'	07°09'43"	34°24'53"
21+25.00	25.00'	30.42'	19.45'	07°09'43"	41°34'36"
21+50.00	25.00'	30.42'	19.45'	07°09'43"	48°44'19"
21+51.58	1.58'	1.93'	1.23'	00°27'09"	49°11'29"
				Def/Ft =17.18873 Min.	

CURVE TABLE – C16					
△ =102°50'27" R = 115.00' T = 144.16' L = 206.41' LC = 179.80'					
CURVE DATA BASED ON CENTERLINE △ /2 = 51°25'14"					
		CHORD LENGTH			
STATION	ARC	8'Off LtCb	8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
21+66.87	–	–	–	00°00'00"	00°00'00"
21+75.00	8.13'	9.68'	6.57'	02°01'31"	02°01'31"
22+00.00	25.00'	29.72'	20.18'	06°13'40"	08°15'11"
22+25.00	25.00'	29.72'	20.18'	06°13'40"	14°28'51"
22+50.00	25.00'	29.72'	20.18'	06°13'40"	20°42'31"
22+75.00	25.00'	29.72'	20.18'	06°13'40"	26°56'11"
23+00.00	25.00'	29.72'	20.18'	06°13'40"	33°09'51"
23+25.00	25.00'	29.72'	20.18'	06°13'40"	39°23'32"
23+50.00	25.00'	29.72'	20.18'	06°13'40"	45°37'12"
23+73.28	23.28'	27.69'	18.80'	05°48'02"	51°25'13"
				Def/Ft =14.94673 Min.	

LEGEND

+ STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

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411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR

THE WATERFRONT RESIDENTIAL ADDITION

MOSAIC AND GENOVA PAVING
SHEET TITLE

PPP #188
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April 2008

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19 of 33

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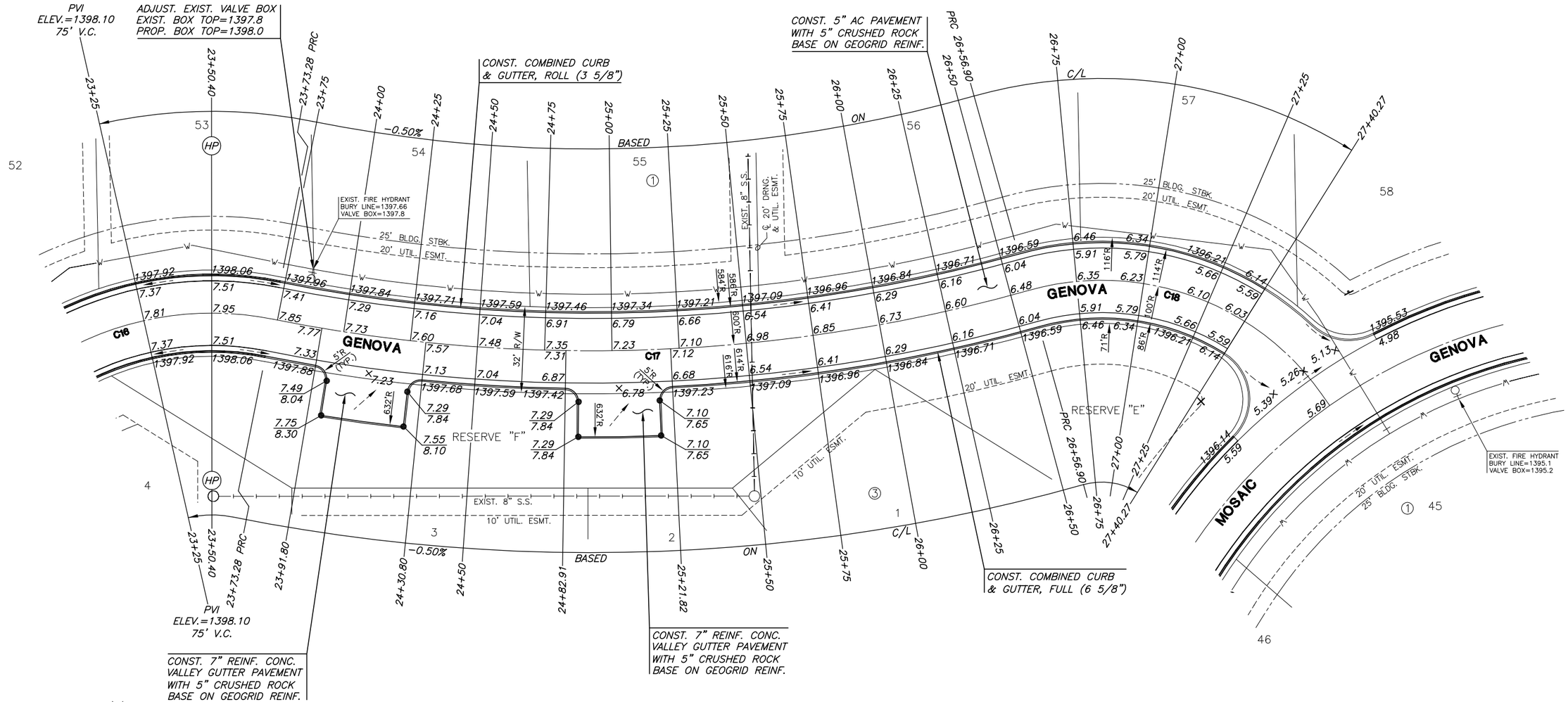

SCALE: 1"=20'

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N

CURVE TABLE – C17

△ = 27°05'01" R = 600.00' T = 144.51' L = 283.62' LC = 280.99'

CURVE DATA BASED ON CENTERLINE △ /2 = 13°32'30"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
23+73.28	–	–	–	00°00'00"	00°00'00"
23+91.80	18.52'	17.84'	19.20'	00°53'03"	00°53'03"
24+00.00	8.20'	7.90'	8.50'	00°23'29"	01°16'33"
24+25.00	25.00'	24.08'	25.91'	01°11'37"	02°28'10"
24+30.80	5.80'	5.59'	6.01'	00°16'37"	02°44'47"
24+50.00	19.20'	18.50'	19.90'	00°55'00"	03°39'47"
24+75.00	25.00'	24.08'	25.91'	01°11'37"	04°51'24"
24+82.91	7.91'	7.62'	8.20'	00°22'40"	05°14'04"
25+00.00	17.09'	16.46'	17.72'	00°48'58"	06°03'02"
25+21.82	21.82'	21.02'	22.62'	01°02'31"	07°05'32"
25+25.00	3.18'	3.06'	3.30'	00°09'07"	07°14'39"
25+50.00	25.00'	24.08'	25.91'	01°11'37"	08°26'16"
25+75.00	25.00'	24.08'	25.91'	01°11'37"	09°37'53"
26+00.00	25.00'	24.08'	25.91'	01°11'37"	10°49'30"
26+25.00	25.00'	24.08'	25.91'	01°11'37"	12°01'07"
26+50.00	25.00'	24.08'	25.91'	01°11'37"	13°12'45"
26+56.90	6.90'	6.65'	7.15'	00°19'46"	13°32'31"
				Def/Ft = 2.86479 Min.	

CURVE TABLE – C18

△ = 70°27'00" R = 100.00' T = 70.61' L = 122.96' LC = 115.36'

CURVE DATA BASED ON CENTERLINE △ /2 = 35°13'30"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
26+56.90	–	–	–	00°00'00"	00°00'00"
26+75.00	18.10'	22.05'	14.10'	05°11'07"	05°11'07"
27+00.00	25.00'	30.42'	19.45'	07°09'43"	12°20'50"
27+25.00	25.00'	30.42'	19.45'	07°09'43"	19°30'33"
27+40.27	15.27'	18.61'	11.90'	04°22'28"	23°53'01"
27+50.00	9.73'	11.87'	7.59'	02°47'15"	26°40'16"
27+75.00	25.00'	30.42'	19.45'	07°09'43"	33°49'59"
27+79.86	4.86'	5.93'	3.79'	01°23'31"	35°13'30"
				Def/Ft =17.18873 Min.	

LEGEND

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411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR THE WATERFRONT RESIDENTIAL ADDITION

MOSAIC PAVING
SHEET TITLE

PPP #188
PROJECT NUMBER

DFL
DESIGN BY

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DRAWN BY

GJA
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April 2008

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20 of 33

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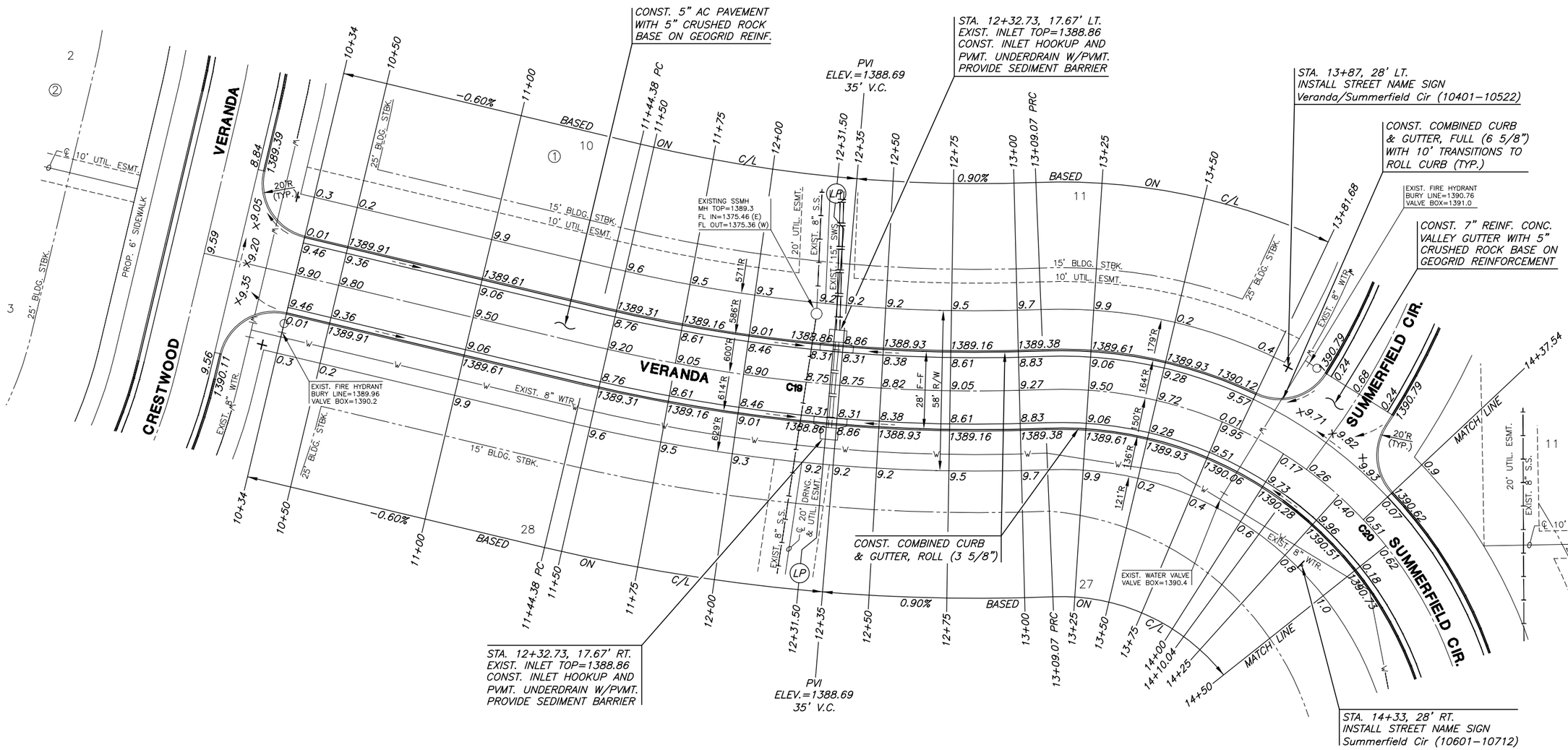

CURVE TABLE – C19

△ = 15°43'35" R = 600.00' T = 82.86' L = 164.69' LC = 164.17'

CURVE DATA BASED ON CENTERLINE △ /2 = 07°51'48"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
11+44.38	–	–	–	00°00'00"	00°00'00"
11+50.00	5.62'	5.41'	5.83'	00°16'06"	00°16'06"
11+75.00	25.00'	24.08'	25.91'	01°11'37"	01°27'43"
12+00.00	25.00'	24.08'	25.91'	01°11'37"	02°39'20"
12+25.00	25.00'	24.08'	25.91'	01°11'37"	03°50'58"
12+50.00	25.00'	24.08'	25.91'	01°11'37"	05°02'35"
12+75.00	25.00'	24.08'	25.91'	01°11'37"	06°14'12"
13+00.00	25.00'	24.08'	25.91'	01°11'37"	07°25'49"
13+09.07	9.07'	8.73'	9.40'	00°25'58"	07°51'47"
				Def/Ft = 2.86479 Min.	

CURVE TABLE – C20

△ =115°17'19" R = 150.00' T = 236.77' L = 301.82' LC = 253.42'

CURVE DATA BASED ON CENTERLINE △ /2 = 57°38'39"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
13+09.07	–	–	–	00°00'00"	00°00'00"
13+25.00	15.93'	18.26'	13.59'	03°02'33"	03°02'33"
13+50.00	25.00'	28.63'	21.31'	04°46'29"	07°49'01"
13+75.00	25.00'	28.63'	21.31'	04°46'29"	12°35'30"
13+81.68	6.68'	7.66'	5.70'	01°16'33"	13°52'03"
14+00.00	18.32'	20.99'	15.62'	03°29'56"	17°21'59"
14+10.04	10.04'	11.51'	8.57'	01°55'03"	19°17'02"
14+25.00	14.96'	17.15'	12.76'	02°51'26"	22°08'28"
14+37.54	12.54'	14.38'	10.70'	02°23'42"	24°32'09"
14+50.00	12.46'	14.28'	10.63'	02°22'47"	26°54'56"
14+75.00	25.00'	28.63'	21.31'	04°46'29"	31°41'25"
15+00.00	25.00'	28.63'	21.31'	04°46'29"	36°27'54"
15+25.00	25.00'	28.63'	21.31'	04°46'29"	41°14'23"
15+50.00	25.00'	28.63'	21.31'	04°46'29"	46°00'51"
15+75.00	25.00'	28.63'	21.31'	04°46'29"	50°47'20"
16+00.00	25.00'	28.63'	21.31'	04°46'29"	55°33'49"
16+10.89	10.89'	12.49'	9.29'	02°04'51"	57°38'40"
				Def/Ft =11.45916 Min.	

SCALE: 1"=20'

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LEGEND

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PAVING AND INCIDENTAL DRAINAGE PLANS FOR THE WATERFRONT RESIDENTIAL ADDITION

VERANDA PAVING
SHEET TITLE

PPP #188
PROJECT NUMBER

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DMU
DRAWN BY

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21 of 33

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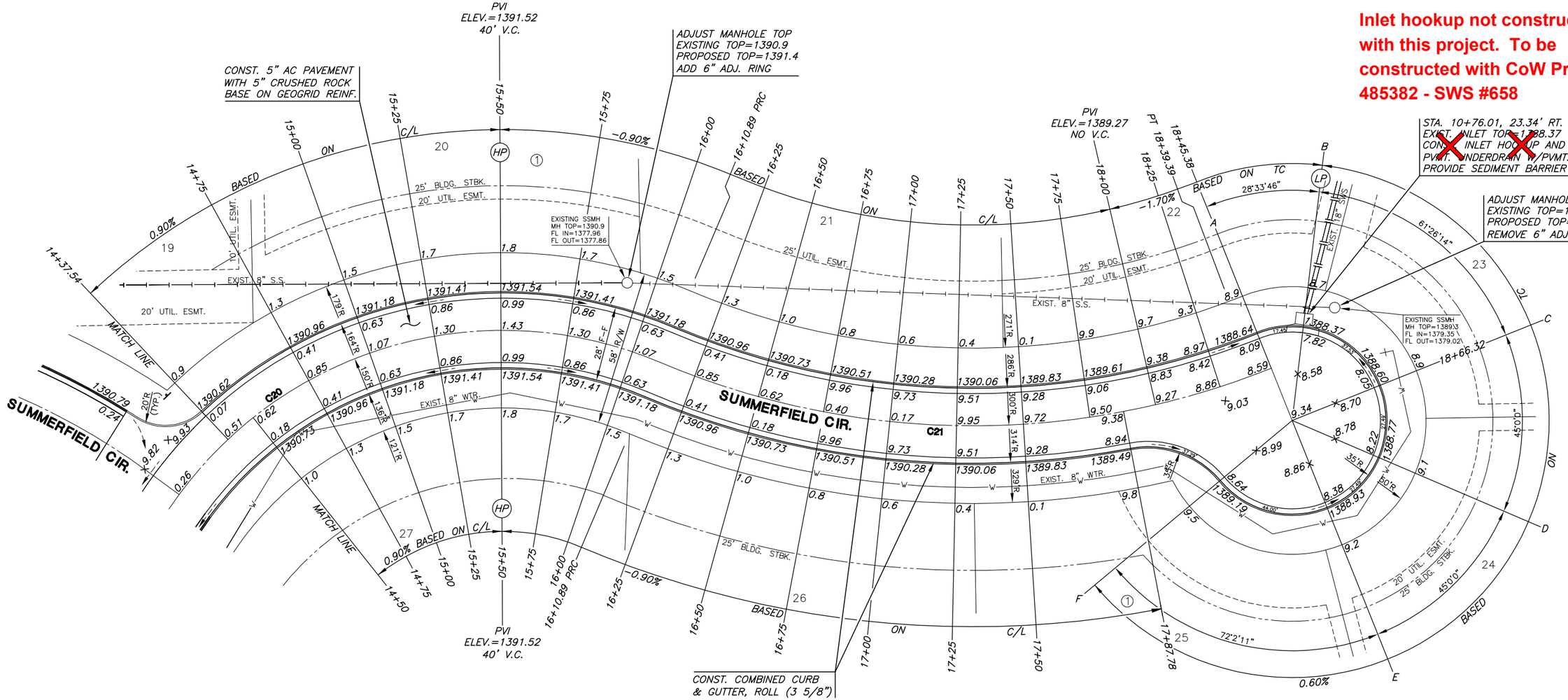
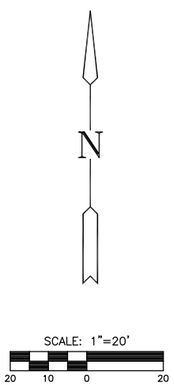
Inlet hookup not constructed with this project. To be constructed with CoW Project 485382 - SWS #658





CURVE TABLE – C21

△ = 43°38'26" R = 300.00' T = 120.11' L = 228.50' LC = 223.02'

CURVE DATA BASED ON CENTERLINE △/2 = 21°49'13"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
16+10.89	–	–	–	00°00'00"	00°00'00"
16+25.00	14.11'	13.07'	15.14'	01°20'51"	01°20'51"
16+50.00	25.00'	23.16'	26.83'	02°23'14"	03°44'05"
16+75.00	25.00'	23.16'	26.83'	02°23'14"	06°07'19"
17+00.00	25.00'	23.16'	26.83'	02°23'14"	08°30'34"
17+25.00	25.00'	23.16'	26.83'	02°23'14"	10°53'48"
17+50.00	25.00'	23.16'	26.83'	02°23'14"	13°17'02"
17+75.00	25.00'	23.16'	26.83'	02°23'14"	15°40'17"
17+87.78	12.78'	11.84'	13.72'	01°13'13"	16°53'30"
18+00.00	12.22'	11.32'	13.12'	01°10'01"	18°03'31"
18+25.00	25.00'	23.16'	26.83'	02°23'14"	20°26'46"
18+39.39	14.39'	13.33'	15.45'	01°22'27"	21°49'13"
				Def/Ft = 5.72958 Min.	

LEGEND

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SUMMERFIELD CIR. PAVING
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22 of 33

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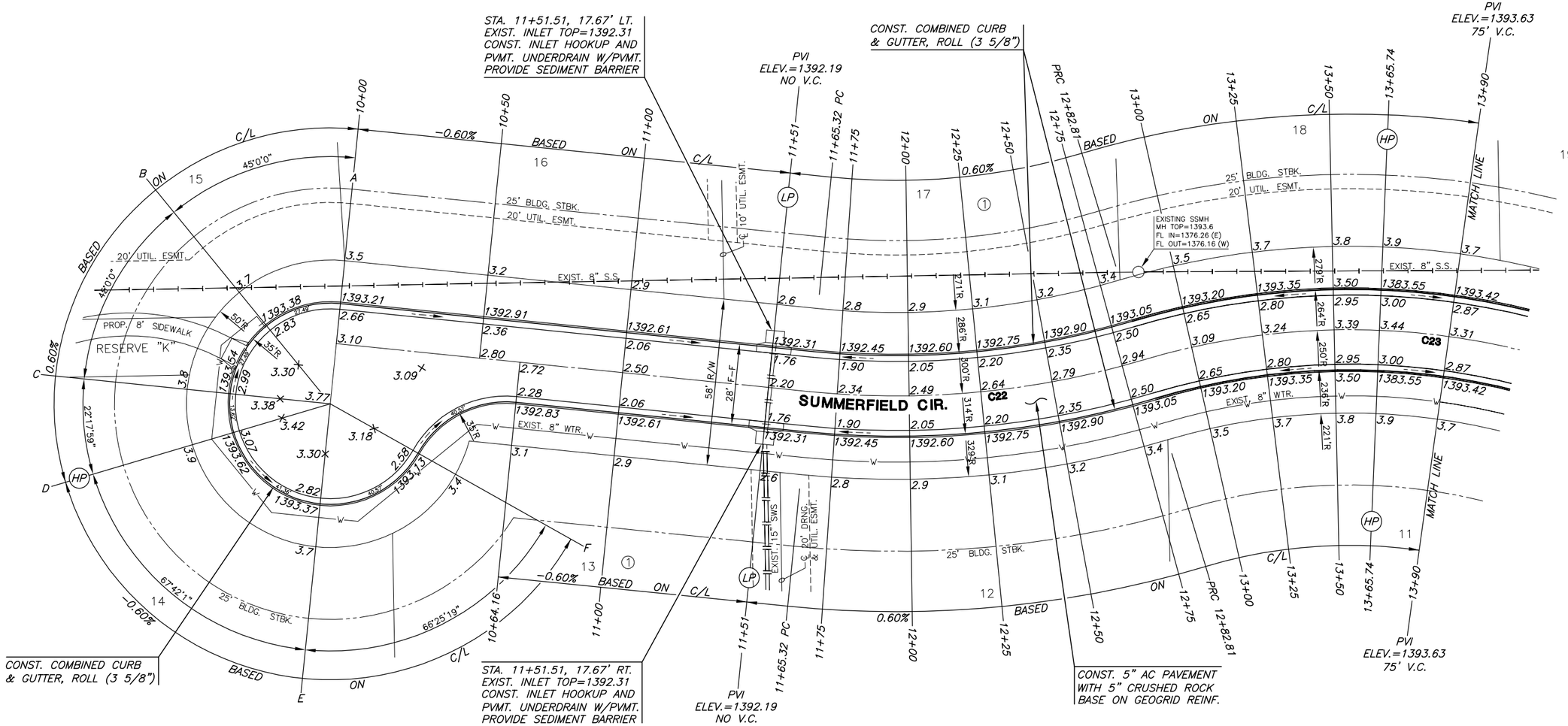

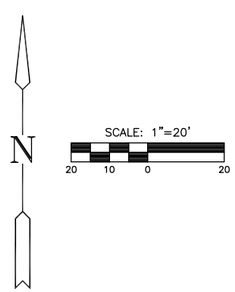

CURVE TABLE – C22

△ = 22°26'18" R = 300.00' T = 59.51' L = 117.49' LC = 116.74'

CURVE DATA BASED ON CENTERLINE △/2 = 11°13'09"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
11+65.32	–	–	–	00°00'00"	00°00'00"
11+75.00	9.68'	8.97'	10.39'	00°55'28"	00°55'28"
12+00.00	25.00'	23.16'	26.83'	02°23'14"	03°18'42"
12+25.00	25.00'	23.16'	26.83'	02°23'14"	05°41'56"
12+50.00	25.00'	23.16'	26.83'	02°23'14"	08°05'11"
12+75.00	25.00'	23.16'	26.83'	02°23'14"	10°28'25"
12+82.81	7.81'	7.23'	8.38'	00°44'44"	11°13'09"
				Def/Ft = 5.72958 Min.	

LEGEND

STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

NOTE:
TOP OF CURB ELEVATIONS SHOWN ARE FOR FULL CURB. CONSTRUCT CURB AND GUTTER AS NOTED.

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR

THE WATERFRONT RESIDENTIAL ADDITION

SUMMERFIELD CIR. PAVING
SHEET TITLE

PPP #188
PROJECT NUMBER

DFL
DESIGN BY

DMU
DRAWN BY

GJA
CHECKED BY

ISSUED
May 2008

REVISED

SHEET NO.
23 of 33

PLOTTED: Tuesday, May 20, 2008 @ 09:13AM

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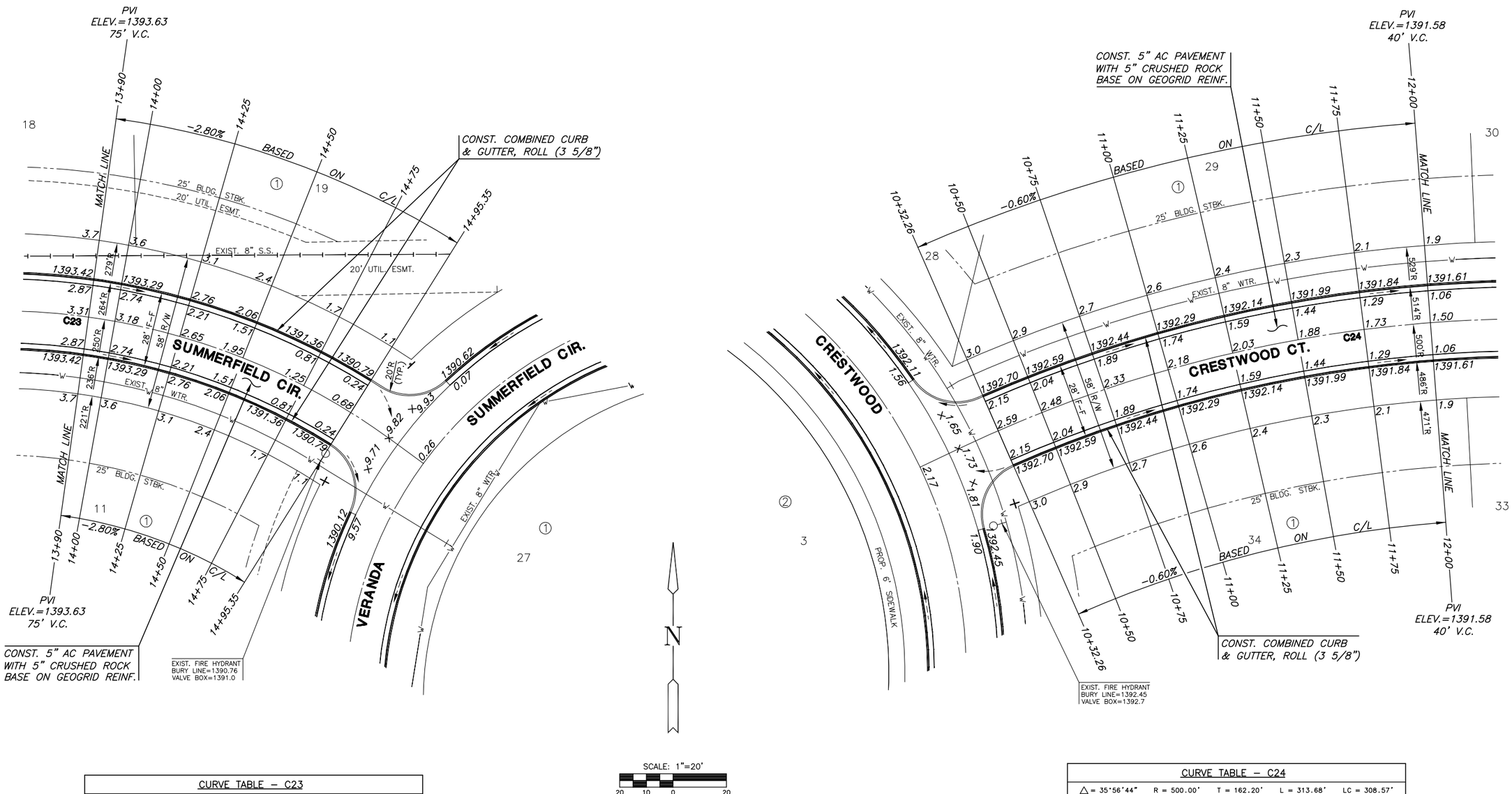

SCALE: 1"=20'

20 10 0 20

CURVE TABLE – C23

△ = 52°53'36" R = 250.00' T = 124.35' L = 230.79' LC = 222.68'

CURVE DATA BASED ON CENTERLINE △ /2 = 26°26'48"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
12+82.81	–	–	–	00°00'00"	00°00'00"
13+00.00	17.19'	18.70'	15.67'	01°58'11"	01°58'11"
13+25.00	25.00'	27.19'	22.79'	02°51'53"	04°50'05"
13+50.00	25.00'	27.19'	22.79'	02°51'53"	07°41'58"
13+75.00	25.00'	27.19'	22.79'	02°51'53"	10°33'51"
14+00.00	25.00'	27.19'	22.79'	02°51'53"	13°25'44"
14+25.00	25.00'	27.19'	22.79'	02°51'53"	16°17'38"
14+50.00	25.00'	27.19'	22.79'	02°51'53"	19°09'31"
14+75.00	25.00'	27.19'	22.79'	02°51'53"	22°01'24"
14+95.35	20.35'	22.13'	18.55'	02°19'55"	24°21'19"
15+00.00	4.65'	5.06'	4.24'	00°31'58"	24°53'17"
15+13.60	13.60'	14.80'	12.40'	01°33'31"	26°26'48"
				Def/Ft = 6.87549 Min.	

LEGEND

+ STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

NOTE:
TOP OF CURB ELEVATIONS SHOWN ARE FOR FULL CURB. CONSTRUCT CURB AND GUTTER AS NOTED.

CURVE TABLE – C24

△ = 35°56'44" R = 500.00' T = 162.20' L = 313.68' LC = 308.57'

CURVE DATA BASED ON CENTERLINE △ /2 = 17°58'22"

STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
10+17.39	–	–	–	00°00'00"	00°00'00"
10+25.00	7.61'	7.94'	7.28'	00°26'10"	00°26'10"
10+50.00	25.00'	26.10'	23.90'	01°25'57"	01°52'06"
10+75.00	25.00'	26.10'	23.90'	01°25'57"	03°18'03"
11+00.00	25.00'	26.10'	23.90'	01°25'57"	04°44'00"
11+25.00	25.00'	26.10'	23.90'	01°25'57"	06°09'56"
11+50.00	25.00'	26.10'	23.90'	01°25'57"	07°35'53"
11+75.00	25.00'	26.10'	23.90'	01°25'57"	09°01'49"
12+00.00	25.00'	26.10'	23.90'	01°25'57"	10°27'46"
12+25.00	25.00'	26.10'	23.90'	01°25'57"	11°53'43"
12+50.00	25.00'	26.10'	23.90'	01°25'57"	13°19'39"
12+75.00	25.00'	26.10'	23.90'	01°25'57"	14°45'36"
13+00.00	25.00'	26.10'	23.90'	01°25'57"	16°11'32"
13+25.00	25.00'	26.10'	23.90'	01°25'57"	17°37'29"
13+31.07	6.07'	6.34'	5.81'	00°20'53"	17°58'22"
				Def/Ft = 3.43775 Min.	

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316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR

THE WATERFRONT RESIDENTIAL ADDITION

SUMMERFIELD CIR. (W) AND CRESTWOOD CT. (N) PAVING

SHEET TITLE

PPP #188
PROJECT NUMBER

DFL
DESIGN BY
DMU
DRAWN BY
GJA
CHECKED BY

ISSUED
March 2008
REVISED

SHEET NO.
24 of 33

PLOTTED: Tuesday, May 20, 2008 @ 09:13AM

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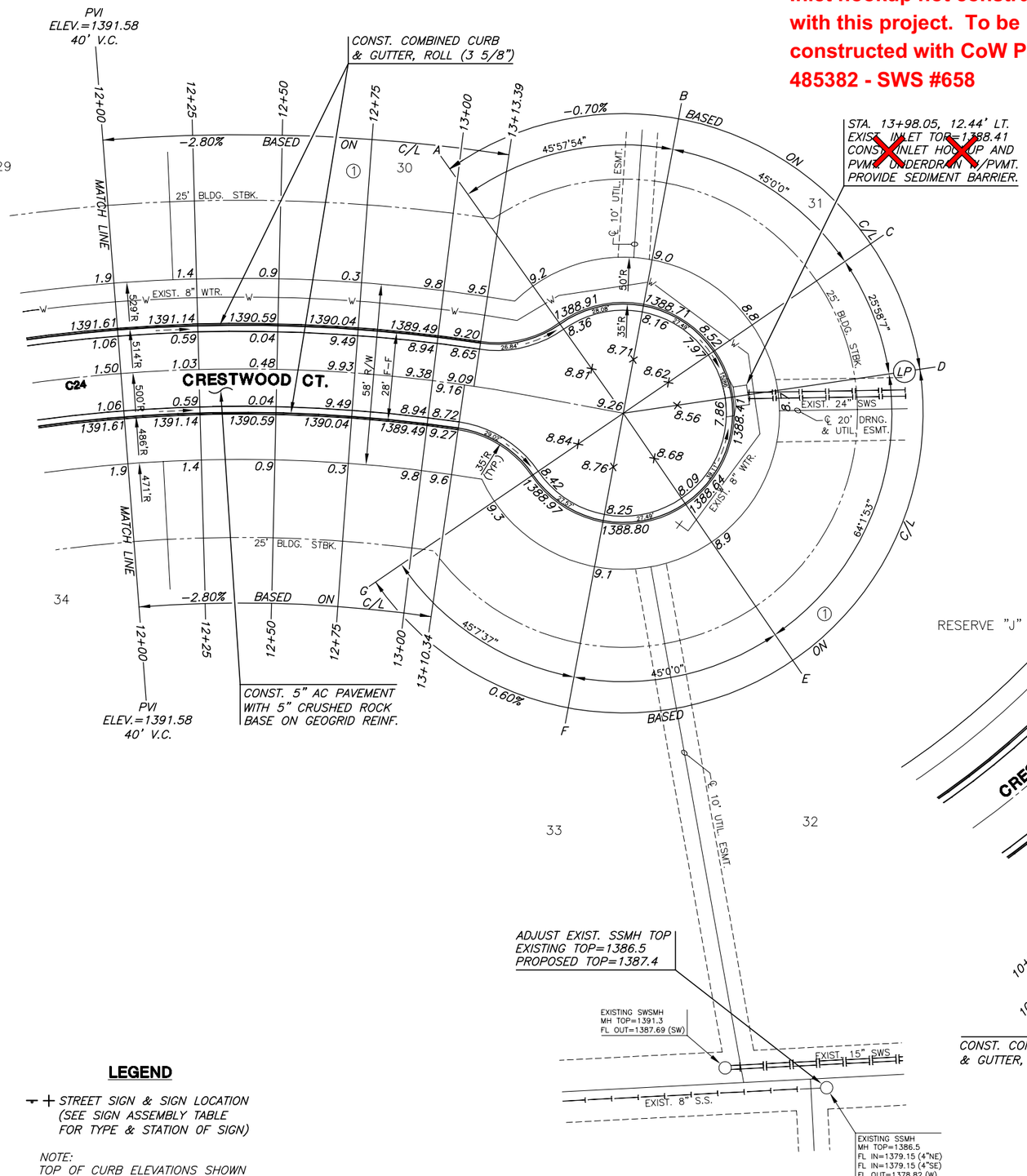
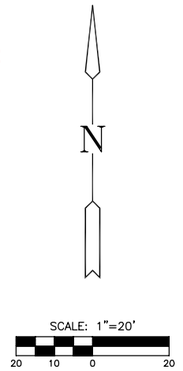
Inlet hookup not constructed with this project. To be constructed with CoW Project 485382 - SWS #658





CURVE TABLE – C25						
△ = 64°30'42"	R = 150.00'	T = 94.66'	L = 168.89'	LC = 160.11'		
CURVE DATA BASED ON CENTERLINE			△ /2 = 32°15'21"			
STATION	ARC	CHORD LENGTH 8'Off LtCb	CHORD LENGTH 8'Off RtCb	DEFLECTION	TOTAL DEFLECTION	
10+47.05	–	–	–	00°00'00"	00°00'00"	
10+75.00	27.95'	23.82'	32.00'	05°20'17"	05°20'17"	
11+00.00	25.00'	21.31'	28.63'	04°46'29"	10°06'46"	
11+25.00	25.00'	21.31'	28.63'	04°46'29"	14°53'14"	
11+50.00	25.00'	21.31'	28.63'	04°46'29"	19°39'43"	
11+75.00	25.00'	21.31'	28.63'	04°46'29"	24°26'12"	
12+00.00	25.00'	21.31'	28.63'	04°46'29"	29°12'41"	
12+15.94	15.94'	13.60'	18.27'	03°02'40"	32°15'21"	
				Def/Ft =11.45916 Min.		

LEGEND

STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

NOTE:
TOP OF CURB ELEVATIONS SHOWN ARE FOR FULL CURB. CONSTRUCT CURB AND GUTTER AS NOTED.

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR

THE WATERFRONT RESIDENTIAL ADDITION

CRESTWOOD CT. (N) AND CRESTWOOD CT. (S) PAVING
SHEET TITLE

PPP #188
PROJECT NUMBER

DFL
DESIGN BY
DMU
DRAWN BY
GJA
CHECKED BY

ISSUED
May 2008
REVISED

SHEET NO.
25 of 33

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GENERAL GRADING NOTES:

1. UNLESS OTHERWISE SPECIFIED, ALL CONSTRUCTION SHALL COMPLY WITH CITY OF WICHITA, KANSAS, STANDARD SPECIFICATIONS.

2. 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 HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

3. A 6" (MAX. DEPTH) LAYER OF TOPSOIL SHALL BE STRIPPED IN ALL AREAS TO RECEIVE FILL AND SAVED BACK FOR REPLACEMENT IN NON-BUILDING AND NON-PAVED AREAS. ANY EXCESS TOPSOIL SHALL BE SEPARATELY STOCKPILED ON-SITE AT AN OWNER APPROVED LOCATION. EXCESS MATERIAL PLACEMENT SHALL BE SUBSIDIARY TO BID ITEM "EARTHWORK".

4. ALL FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY. MAXIMUM LIFT THICKNESS SHALL BE 8". CONTRACTOR TO PROVIDE ADEQUATE COMPACTION TESTING TO CONFIRM COMPACTION.

5. CONTRACTOR SHALL NOTIFY UTILITY COMPANIES OF CONSTRUCTION SCHEDULING.

6. EXISTING UTILITIES AND THEIR LOCATIONS, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN BTAINED FROM THE VARIOUS COMPANIES AND IS EITHER FROM COMPANY UTILITY DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE PLAN LOCATIONS SHOWN ARE NOT GUARANTEED. ADDITIONAL EXISTING UTILITIES MAY ALSO BE ENCOUNTERED.

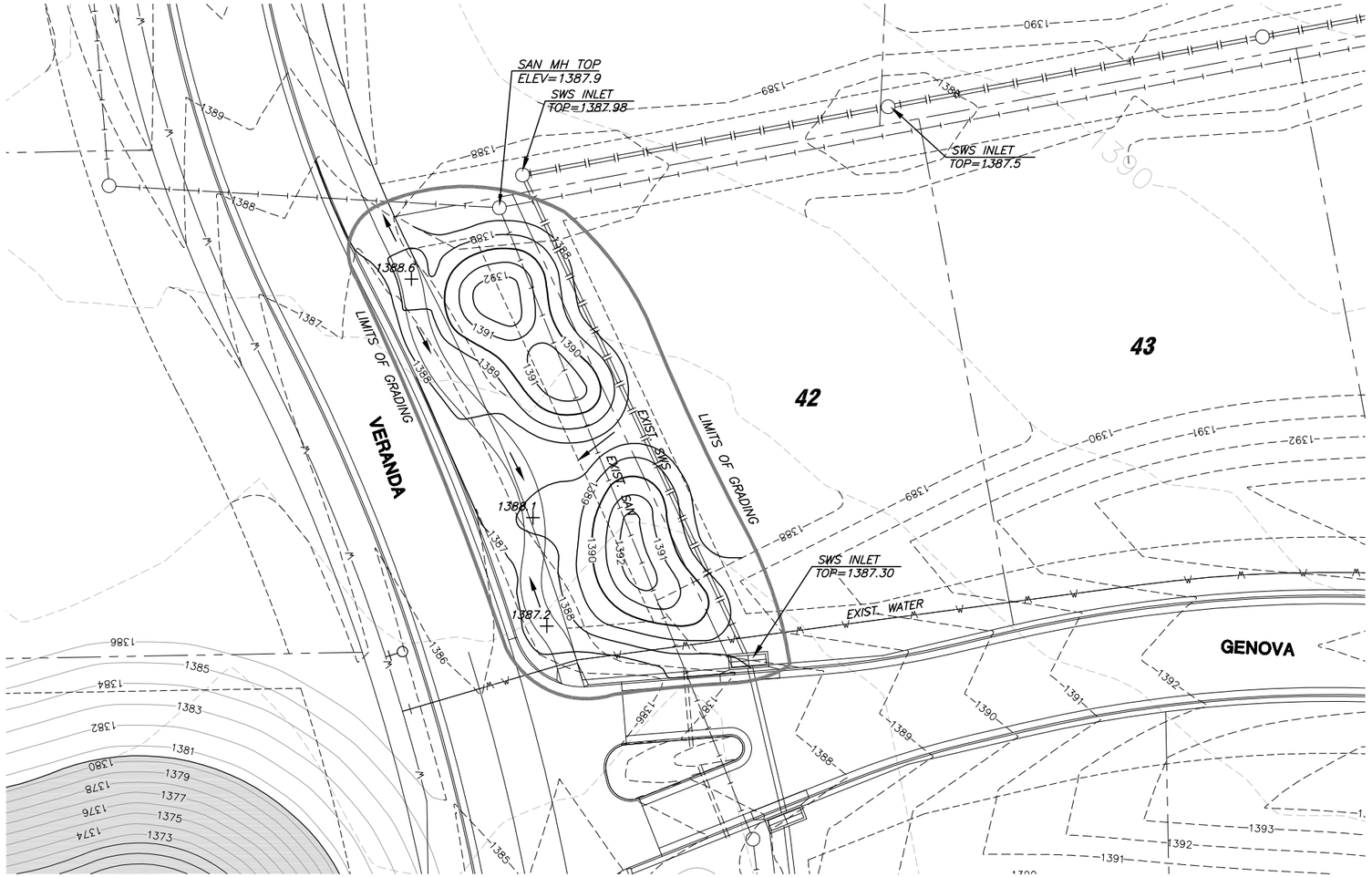
7. THE CONTRACTOR SHALL NOT REMOVE ANY EXISTING VEGETATION WITHOUT PRIOR APPROVAL OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL NOT PERFORM ANY GRADING OPERATIONS WITHIN THE DRIPLINE OF ANY EXISTING TREES. COORDINATE GRADING WITH MKEC LANDSCAPE ARCHITECT.

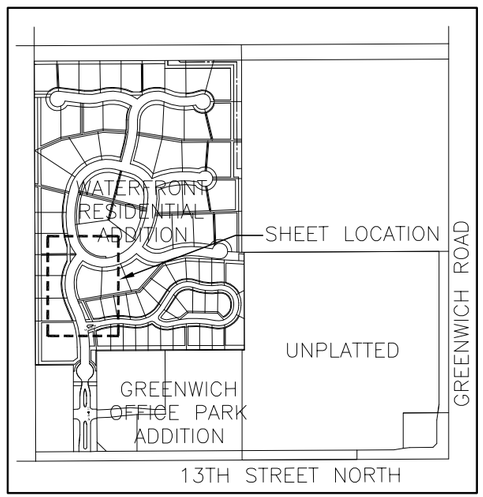
8. THIS IS DESIGN GRADING. ALL GRADES SHALL BE CONTOURED SMOOTHLY WITH GENTLE ROUNDING/SHAPING OF ALL AFFECTED LAND SURFACES. ABRUPT TRANSITIONS AT THE TOP OF SLOPES WHERE PROPOSED GRADES MEET EXISTING ARE NOT ACCEPTABLE. SURVEY STAKES FOR POND GRADING ARE FOR GENERAL GRADING PURPOSES ONLY. NOT ALL SLOPES ARE CONSTANT AND THEREFORE THE GRADING PLANS SHALL BE REFERRED TO FOR FINAL GRADE SHAPING. ALL BERMS & POND EDGES SHALL BE FINAL GRADED/SHAPED WITH A TRACK DOZER, NOT A BLADE. THE GRADING SHALL BE APPROVED BY MKEC'S LANDSCAPE ARCHITECT PRIOR TO THE ADDITION OF THE TOPSOIL LAYER.

9. TOPSOIL SHALL BE REPLACED AT A DEPTH OF 6" IN POND RESERVE AREA (EXCEPT GRADES BELOW THE PROPOSED NORMAL POOL ELEVATION WITHIN PONDS). THE TOPSOIL REPLACEMENT THICKNESS SHALL BE A MINIMUM OF 12" ON BERMS. NOTE: THE FINISHED GRADE INDICATES THE SURFACE ELEVATION AFTER THE TOPSOIL LAYER HAS BEEN PLACED. THE TOP 12" OF TOPSOIL SHALL NOT BE PLACED ON BERMS WITHOUT PRIOR APPROVAL FROM THE LANDSCAPE ARCHITECT. IF THE TOP 12" OF TOPSOIL IS PLACED PRIOR TO APPROVAL AND THERE IS A PROBLEM, THE CONTRACTOR MAY NEED TO REWORK THE BERM IN ORDER TO CONSTRUCT PER THE INTENT OF THE PLAN.

10. AS THE PROJECT NEARS COMPLETION, THE CONTRACTOR SHALL RIP (SCARIFY) ALL HAUL ROADS WITH AN AGRICULTURAL IMPLEMENT INTENDED FOR SUCH PURPOSES TO A DEPTH OF 18". MULTIPLE PASSES MAY BE NECESSARY TO THOROUGHLY ALEVIATE COMPACTION.

11. IN THE EVENT THAT OFFSITE TOPSOIL IS NEEDED, IT SHALL BE FERTILE NATURAL TOPSOIL, TYPICAL OF THE LOCALITY, OBTAINED FROM WELL DRAINED AREAS. STOCKPILED TOPSOIL MAY BE USED. IT SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OR SLAG AND SHALL BE FREE OF STONES, LUMPS, STICKS, PLANTS OR THEIR ROOTS, TOXIC SUBSTANCES OR OTHER EXTRANEOUS MATTER THAT MAY BE HARMFUL TO PLANT GROWTH OR WOULD INTERFERE WITH FUTURE MAINTENANCE. TOPSOIL pH RANGE SHALL BE 5.5 TO 7.0. TOPSOIL SHALL BE APPROVED BY MKEC'S LANDSCAPE ARCHITECT PRIOR TO PLACEMENT.





VICINITY MAP

BERM EARTHWORK TABULATIONS:

BID QTY'S	EXCAVATION
EXCAVATION	0 CY
COMPACTION (95%)	420 CY
CONTRACTOR FURNISH	480 CY

NOTE: 15% HAS BEEN ADDED TO QUANTITIES TO ALLOW FOR COMPACTION AND HANDLING.

N

SCALE: 1"=50'

50 25 0 50

LEGEND

- PROPOSED TREE PROTECTION
- EXISTING STORM WATER SEWER
- W — EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- 1359 — EXISTING CONTOURS
- 1360 — PROPOSED CONTOURS
- LIMITS OF GRADING
- NORMAL POOL

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THE WATERFRONT RESIDENTIAL ADDITION

BERM GRADING PLAN
SHEET TITLE

PPP #188
PROJECT NUMBER

MLP
DESIGN BY

MLP
DRAWN BY

GJA
CHECKED BY

ISSUED
May 2008
REVISED

SHEET NO.
25A of 33

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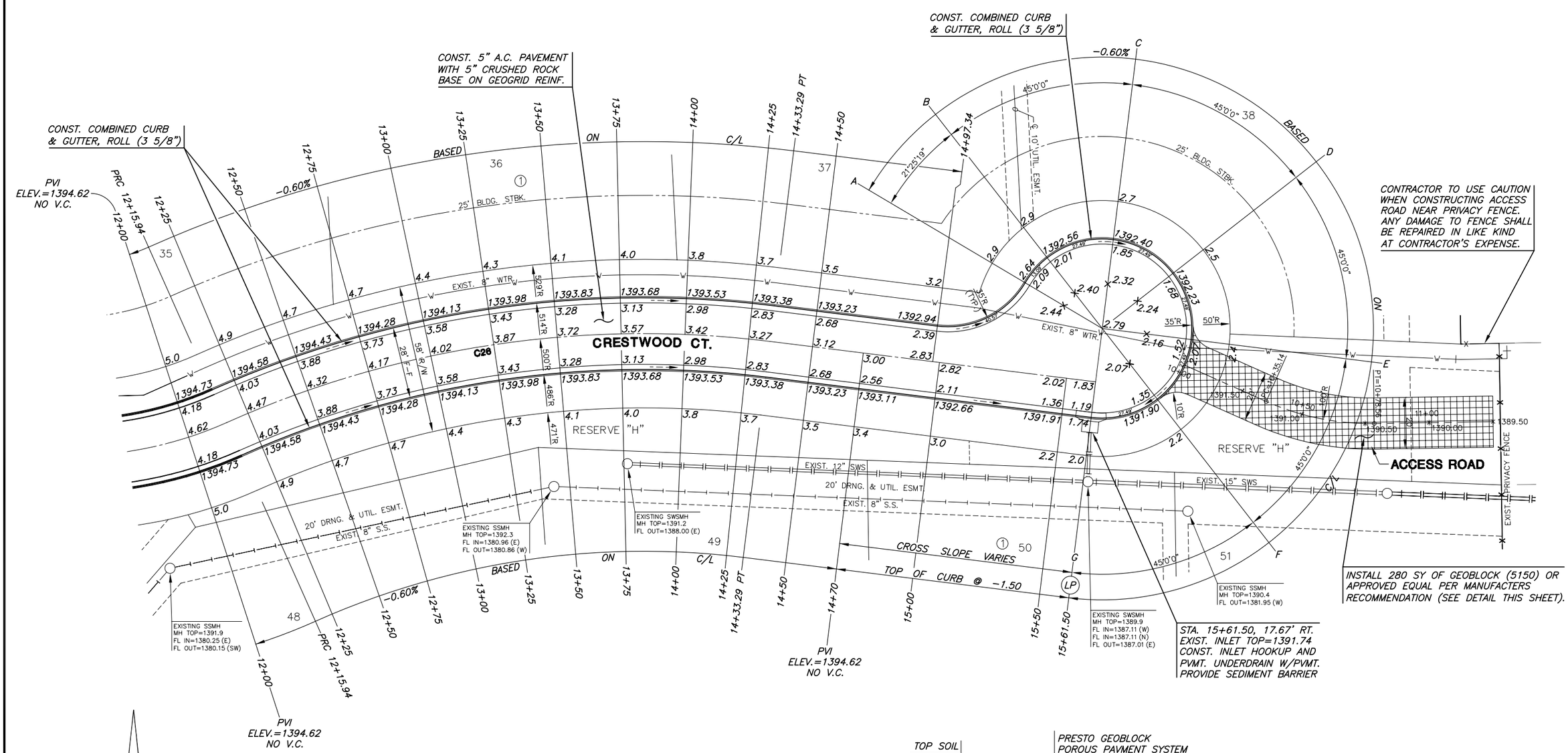
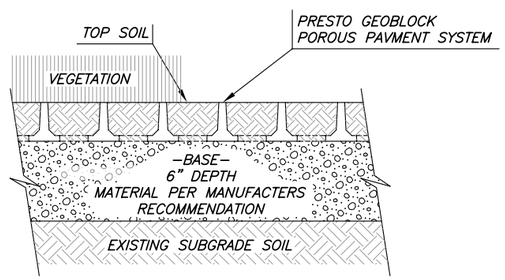


N

SCALE: 1"=20'

20 10 0 20

CURVE TABLE – C26					
△ = 31°07'57" R = 400.00' T = 111.43' L = 217.35' LC = 214.68'					
CURVE DATA BASED ON CENTERLINE △/2 = 15°33'59"					
		CHORD LENGTH			
STATION	ARC	8'Off LtCb	8'Off RtCb	DEFLECTION	TOTAL DEFLECTION
12+15.94	–	–	–	00°00'00"	00°00'00"
12+25.00	9.06'	9.56'	8.56'	00°38'56"	00°38'56"
12+50.00	25.00'	26.37'	23.62'	01°47'26"	02°26'22"
12+75.00	25.00'	26.37'	23.62'	01°47'26"	04°13'47"
13+00.00	25.00'	26.37'	23.62'	01°47'26"	06°01'13"
13+25.00	25.00'	26.37'	23.62'	01°47'26"	07°48'39"
13+50.00	25.00'	26.37'	23.62'	01°47'26"	09°36'05"
13+75.00	25.00'	26.37'	23.62'	01°47'26"	11°23'31"
14+00.00	25.00'	26.37'	23.62'	01°47'26"	13°10'56"
14+25.00	25.00'	26.37'	23.62'	01°47'26"	14°58'22"
14+33.29	8.29'	8.74'	7.83'	00°35'36"	15°33'58"
				Def/Ft = 4.29718 Min.	



GEOBLOCK DETAIL

NOT TO SCALE

LEGEND

-+ STREET SIGN & SIGN LOCATION (SEE SIGN ASSEMBLY TABLE FOR TYPE & STATION OF SIGN)

NOTE:
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CRESTWOOD CT. (S) PAVING
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PPP #188
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DFL
DESIGN BY

DMU
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ISSUED
May 2008
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SHEET NO.
26 of 33

PLOTTED: Monday, May 12, 2008 @ 09:32AM

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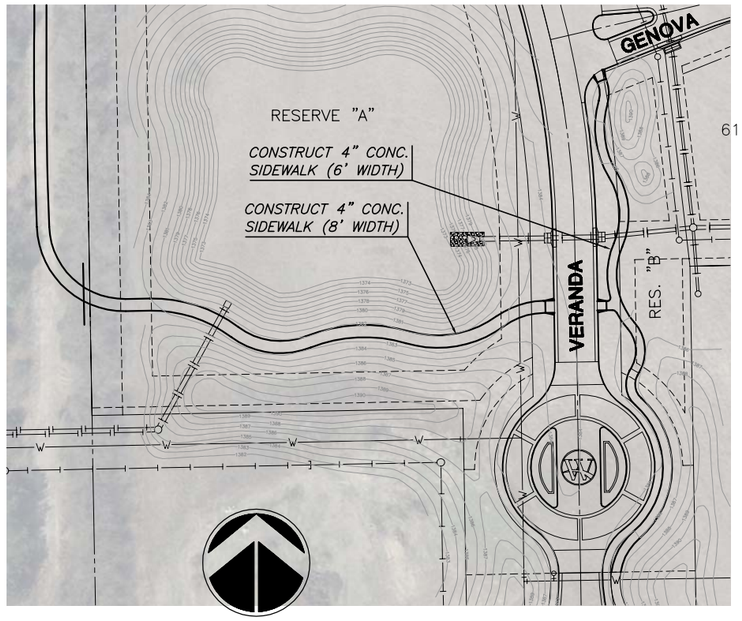
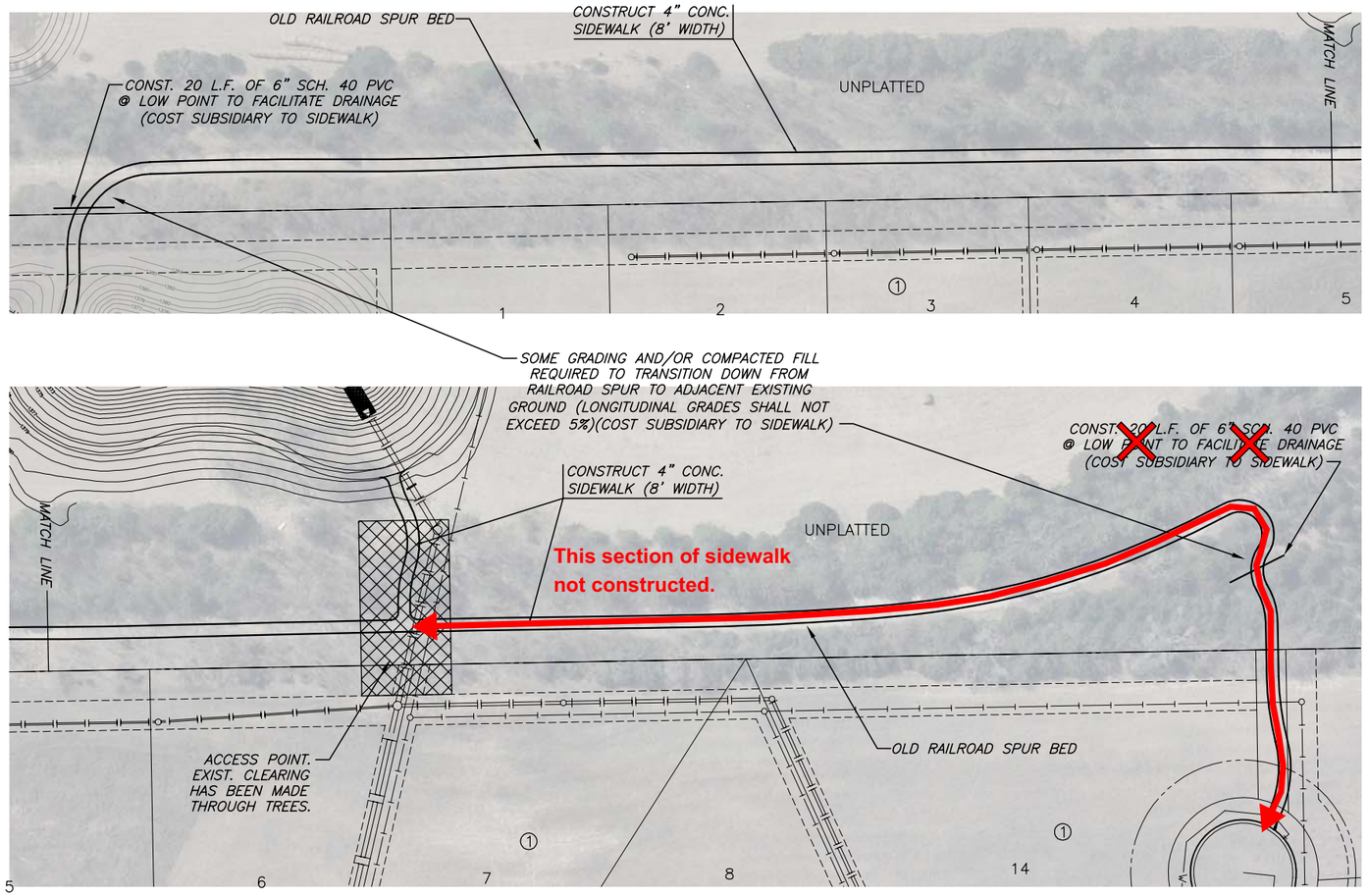
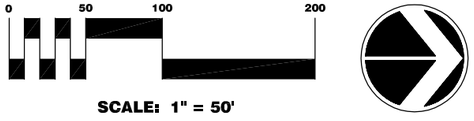


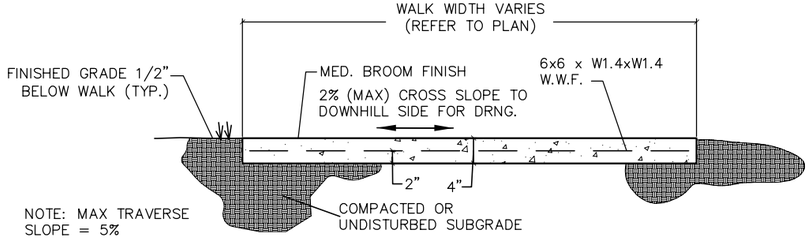
ENTRANCE AND POND SIDEWALKS



RAILWAY SIDEWALKS

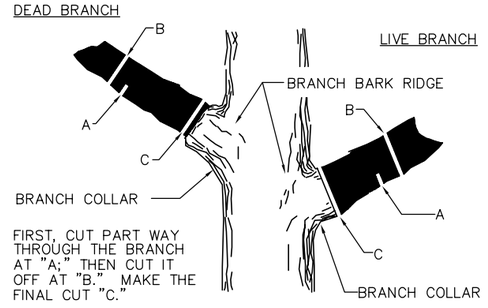


SCALE: 1" = 50'



TYP. SIDEWALK DETAIL

NOT TO SCALE



TREE TRIMMING DETAIL

NOT TO SCALE

CONCRETE SIDEWALK NOTES:

1. ALL SIDEWALK MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS EXCEPT AS OTHERWISE NOTED.

2. ALL SIDEWALKS SHALL BE 4" THICK. SIDEWALK SHALL BE FORMED USING 1x4 PINE BOARDS, (MASONITE ON RADII LESS THAN 10'). THE WALK ALIGNMENT SHALL BE SMOOTH AND FLOWING AS DEPICTED ON PLAN, WITHOUT TWISTS OR KINKS. LONGITUDINAL GRADES SHALL NOT EXCEED 5% AND CROSS SLOPES SHALL NOT EXCEED 2%. SOME GRADING TO MEET SLOPE REQUIREMENTS SHOULD BE EXPECTED.

3. REFER TO THE GRADING PLAN FOR PROPOSED SIDEWALK GRADES.

4. EXPANSION JOINTS SHALL BE PLACED @ 80' O.C. OR AS NOTED. PIN TOGETHER E.J. W/#4 SMOOTH BAR x 2'-0" @ 18" O.C.

5. 3/4" TOOLED CONTROL JOINTS SHALL BE SPACED AT DISTANCE EQUAL TO WALK WIDTH OR AS NOTED.

6. THE OWNERS REPRESENTATIVE RESERVES THE RIGHT TO FIELD ADJUST THE WALK ALIGNMENT AS NEEDED TO WORK WITH EXISTING SITE FEATURES.

7. SIDEWALK CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE WITH A MAX. 2% CROSS SLOPE ON ALL WALKS. ADDITIONAL TOP SOIL AND/OR EXCAVATION MAY BE NECESSARY TO PROVIDE A SMOOTH TRANSITION FROM WALK TO POND EDGE.

8. CONTRACTOR SHALL TAKE CARE TO LIMIT BRANCH TRIMMING AND SMALL TREE REMOVAL ALONG THE WALK CORRIDOR. CONCRETE TRUCKS MAY STRADDLE FORMWORK TO CONSTRUCT THAT PORTION OF SIDEWALK THAT IS LOCATED ALONG THE OLD RAILROAD SPUR. SOME BUCKETING OR PUMPING MAY BE REQUIRED ALONG WALK SECTIONS THAT WIND THROUGH EXISTING TREES.

GEMERAL TREE PROTECTION NOTES:

1. TREES ARE AN IMPORTANT ASSET TO TEH DEVELOPER. EVERY EFFORT SHALL BE MADE TO PRESERVE EACH AND EVERY TREE (UNLESS NOTED FOR REMOVAL) AS DIRECTED IN THESE PLANS AND NOTES.

2. EQUIPMENT AND CONSTRUCTION MATERIALS SHALL REMAIN OUT OF AND AWAY FROM TREE DRIPLINES SO AS NOT TO COMPACT THE ROOT ZONE OR DAMAGE THE TREE. CHEMICAL SPILL DAMAGE SHALL BE PREVENTED BY FILLING GAS TANKS, CLEANING TOOLS, AND REPAIRING EQUIPMENT WELL OUTSIDE TREE PROTECTED ROOT ZONES. MIXING TRUCKS SHALL BE RINSED OUT OFF SITE. WHERE IT OCCURS THAT A CONSTRUCTION ROUTE OR A PROPOSED IMPROVEMENT TAKES PLACE WITHIN A TREE'S PROTECTED ROOT ZONE, IT MAY BE NECESSARY, DEPENDENT UPON THE TYPE OF CONSTRUCTION AND EQUIPMENT USED, TO INSTALL A ROOT PROTECTION BRIDGE OR APPROVED EQUIVALENT. THIS MAY BE DETERMINED IN THE FIELD AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE.

3. ANY TREE THAT MUST HAVE BRANCHES REMOVED SHALL BE TRIMMED WITH SHARP INSTRUMENTS/TOOLS THAT ARE INTENDED FOR SUCH OPERATIONS. CONSULT LANDSCAPE ARCHITECT PRIOR TO TRIMMING. KNOCKING BRANCHES OFF WITH A BACKHOE OR OTHER SIMILAR MACHINE IS NOT ACCEPTABLE! REFER TO TREE TRIMMING DETAIL ON THIS SHEET FOR TRIMMING PROCEDURE.

MKEC ENGINEERING CONSULTANTS, INC.
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

PAVING AND INCIDENTAL DRAINAGE PLANS FOR

THE WATERFRONT RESIDENTIAL ADDITION

SIDEWALK PLAN
SHEET TITLE

PPP #188
PROJECT NUMBER

DFL
DESIGN BY

DMU
DRAWN BY

GJA
CHECKED BY

ISSUED
May 2008
REVISED

SHEET NO.
27 of 33

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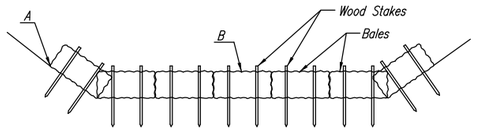
PLOTTED: Tuesday, May 20, 2008 @ 09:15AM

NOTE: Point A must be higher than Point B so that water flows over the bales and not around them.



STRAW BALE DITCH CHECKS

Material Specification:

Bale ditch checks may be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture.
The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
Optional: The downstream scour apron should be constructed of a double-netted straw erosion-control blanket at least 6' wide.
Optional: The metal landscape staples used to anchor the erosion-control blanket should be at least 8" long.

Placement:

Bale ditch checks should be placed perpendicular to the flowline of the ditch.
The ditch check should extend far enough so that the ground level at the ends of the check is higher than the top of the lowest center bale. This prevents water from flowing around the check.
Straw bale ditch checks should not be placed in ditches where high flows are expected. Rock checks should be used instead.
Bales should be placed in ditches with slopes of 6% or less. For slopes steeper than 6%, rock checks should be used.
The following table provides check spacing for a given ditch grade:

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

Proper installation method:

Excavate a trench perpendicular to the ditch flowline that is 4" deep and a bale's width wide. Extend the trench in a straight line along the entire length of the proposed ditch check. Place the soil on the upstream side of the trench-it will be used later.
Optional: On the downstream side of the trench, roll out a length of erosion-control blanket (scour apron) equal to the length of the trench. Place the upstream edge of the erosion-control blanket along the bottom upstream edge of the trench. The erosion control blanket should be anchored in the trench with one row of 8" landscape staples placed on 18" centers. The remainder of the erosion-control blanket (the portion that is not lying in the trench) will serve as the downstream scour apron. This section of the blanket should be anchored to the ground with 8" landscape staples placed around the perimeter of the blanket on 18" centers. The remainder of the blanket should be anchored using two evenly spaced rows of 8" landscape staples on 18" centers placed perpendicular to the flowline of the ditch.
Place the bales in the trench, making sure that they are butted tightly. Two stakes should be driven through each bale along the centerline of the ditch check, approximately 6" to 8" in from the bale ends. Stakes should be driven at least 12" into the ground.
Once all the bales have been installed and anchored, place the excavated soil against the upstream side of the check and compact it. The compacted soil should be no more than 3" to 4" deep and extend upstream no more than 24".

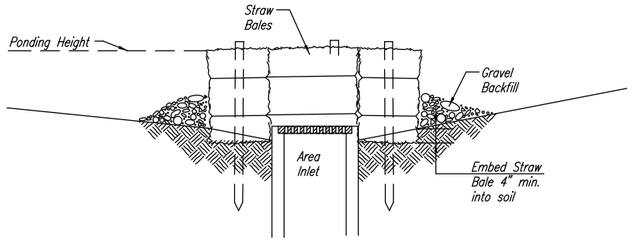
List of common placement/installation mistakes to avoid:

Do not place a bale ditch check directly in front of a culvert outlet. It will not stand up to the concentrated flow.
Do not place bale ditch checks in ditches that will likely experience high flows. They will not stand up to concentrated flow.
Follow prescribed ditch-check spacing guidelines. If spacing guidelines are exceeded, erosion will occur between the ditch checks.
Do not allow water to flow around the ditch check. Make sure that the ditch check is long enough so that the ground level at the ends of the check is higher than the top of the lowest center bale.
Do not place bale ditch checks in channels with shallow soils underlain by rock. If the check is not anchored sufficiently, it will wash out.
Bale ditch checks must be dug into the ground. Bales at ground level do not work because they allow water to flow under the check.

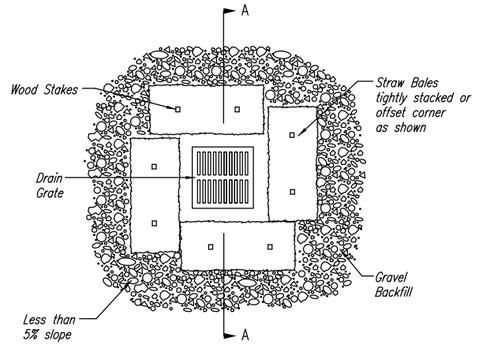
Inspection and Maintenance:

Bale ditch checks should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow around the ditch check?
Does water flow under the ditch check?
Does water flow through spaces between abutting bales?
Are any bales and/or scour aprons (optional) dislodged?
Are bales decomposing due to age and/or water damage?
Does sediment need to be removed from behind the ditch check?



SECTION A-A



STRAW BALE BARRIERS FOR AREA INLETS
(INLET PROTECTION)

Material Specification:

Bale area inlet barriers should be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture.
The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
Twine should be used to bind bales. The use of wire binding is prohibited because it does not biodegrade readily.

Placement:

Bale area inlet barriers should be placed directly around the perimeter of a drop inlet.
When a bale area inlet barrier is located near an inlet that has steep approach slopes, the storage capacity behind the barrier is drastically reduced. Timely removal of sediment must occur for a barrier to operate properly in this location.

Proper Installation Method:

Excavate a trench around the perimeter of the area inlet that is at least 4" deep by a bale's width wide.
Place the bales in the trench, making sure that they are butted tightly. Some bales may need to be shortened to fit into the trench around the area inlet. Two stakes should be driven through each bale, approximately 6" to 8" in from the bale ends.
Stakes should be driven at least 12" into the ground.
Once all the bales have been installed and anchored, place the excavated soil against the receiving side of the barrier and compact it. The compacted soil should be no more than 3" to 4" deep.
Note: When a bale area inlet barrier is placed in a shallow median ditch, make sure that the top of the barrier is not higher than the paved road. In this configuration, water may spread onto the roadway causing a hazardous condition.

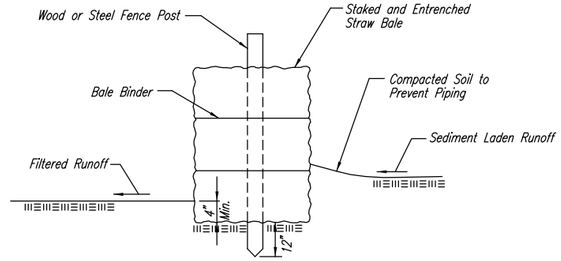
List of common placement installation mistakes to avoid:

Bales should be placed directly against the perimeter of the area inlet. This allows overtopping water to flow directly into the inlet instead of onto nearby soil causing scour.
Bale area inlet barriers must be dug into the ground. Bales at ground level do not work because they allow water to flow under the barrier.

Inspection and Maintenance:

Bale area inlet barriers should be inspected every 7 days and within 24 hours of a rainfall 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow under the area inlet barrier?
Does water flow through spaces between abutting bales?
Are any bales dislodged?
Are bales decomposing due to age and/or water damage?
Does sediment need to be removed from behind the area inlet barrier?



STRAW BALE BARRIERS

Material Specification:

Bale slope barriers may be constructed of wheat straw, oat straw, prairie hay, or bromegrass hay that is free of weeds declared noxious by the Kansas State Board of Agriculture.
The stakes used to anchor the bales should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
Twine should be used to bind bales. The use of wire binding is prohibited because it does not biodegrade readily.

Placement:

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for settling out sediment.
When practicable, bale slope barriers should be placed along contours to avoid a concentration of flow.
Bale slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

Proper installation method:

Excavate a trench the length of the planned slope barrier that is 4" deep and a bale's width wide. Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use.
Place the bales in the trench, making sure that they are butted tightly. Two stakes should be driven through each bale along the centerline of the ditch check, approximately 6" to 8" in from the bale ends. Stakes should be driven at least 12" into the ground.
Once all the bales have been installed and anchored, place the excavated soil against the upslope side of the check and compact it. The compacted soil should be no more than 3" to 4" deep.

List of common placement/installation mistakes to avoid:

When practical, do not place bale slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. Concentrated flow over a slope barrier creates a scour hole on the downslope side of the barrier. The scour hole eventually undermines the bales and the barrier fails.
Do not place bale slope barriers in areas with shallow soils underlain by rock. If the barrier is not anchored sufficiently, it will wash out.
Bale slope barriers must be dug into the ground. Bales at ground level do not work because they allow water to flow under the barrier.

Inspection and Maintenance:

Bale slope barriers should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Are there any points along the slope barrier where water is concentrating?
Does water flow under the slope barrier?
Does water flow through spaces between abutting bales?
Are any bales dislodged?
Are bales decomposing due to age and/or water damage?
Does sediment need to be removed from behind the slope barrier?

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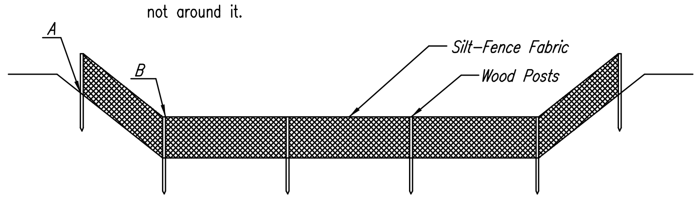
SOIL EROSION BMPs

STRAW BALE DITCH CHECK AND BARRIER DETAILS

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

PROJECT NUMBER	INDEX CODE
PPP #188	607879
DATE: May 2008	Sheet 28 of 33

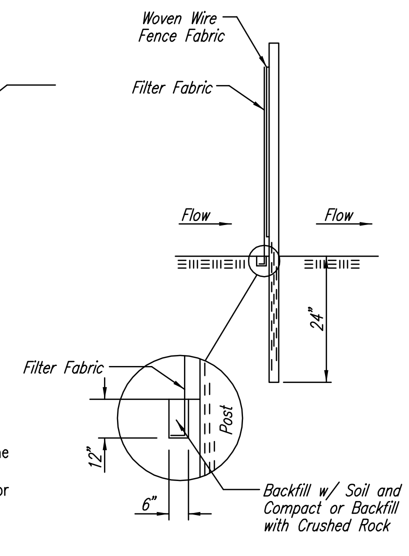
NOTE: Point A must be higher than Point B so that water flows over the silt fence fabric and not around it.



ELEVATION

SILT FENCE DITCH CHECKS

(STREAM PROTECTION)



ANCHOR TRENCH DETAIL

Material Specification:

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

Placement:

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

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

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

Proper installation method:

Excavate a trench perpendicular to the ditch flowline that is at least 12" deep by 6" wide.
Extend the trench in a straight line along the entire length of the proposed ditch check.
Place the soil on the upstream side of the trench for later use.
Roll out a continuous length of silt fence fabric on the downstream side of the trench.
Place the edge of the fabric in the trench starting at the top upstream edge of the trench.
Line two sides of the trench with the fabric as shown on detail. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt fence fabric should remain exposed.
Lay the exposed silt fence on the upstream side of the trench to clear an area for driving in the posts. Just downstream of the trench, drive posts into the ground to a depth of at least 24". Place posts no more than 4' apart.
Attach the silt fence to the anchored post with staples, wire, zip ties, or nails.

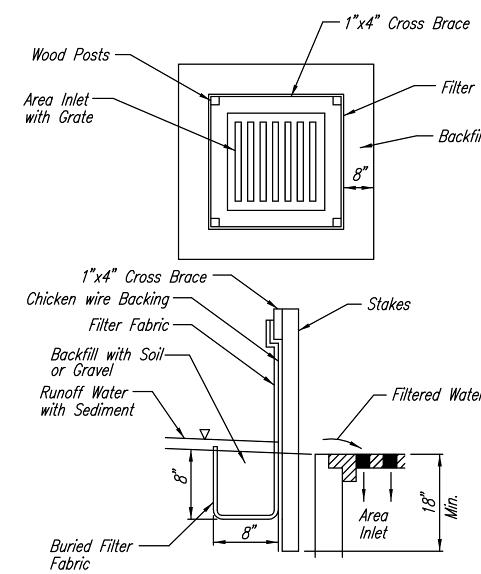
List of common placement/installation mistakes to avoid:

Water should flow through a silt fence ditch check-not over it. Place silt fence in ditches where it is unlikely that it will be overtopped. Silt fence installations quickly deteriorate when water overtops them.
Do not place silt fence posts on the upstream side of the silt fence fabric. In this configuration, the force of the water is not restricted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail.
Do not place a silt fence ditch check directly in front of a culvert outlet. It will not stand up to the concentrated flow.
Do not place silt fence ditch checks in ditches that will likely experience high flows.
They will not stand up to concentrated flow.
Follow prescribed ditch check spacing guidelines. If spacing guidelines are exceeded, erosion will occur between the ditch checks.
Do not allow water to flow around the ditch check. Make sure that the ditch check is long enough so that the ground level at the ends of the fence is higher than the low point on the top of the fence.
Do not place silt fence ditch checks in channels with shallow soils underlain by rock. If the check is not anchored sufficiently, it will wash out.

Inspection and Maintenance:

Silt fence ditch checks should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

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



SILT FENCE BARRIERS FOR AREA INLETS

(INLET PROTECTION)

Material Specification:

Silt fence fabric should conform to the AASHTO M288 96 silt fence specification.
The wire or polymeric mesh backing used to help support the silt fence fabric should conform to the AASHTO M288 96 silt fence specification.
The posts used to support the silt fence fabric should be a hardwood material with the following minimum dimensions: 2" square (nominal) by 4' long.
The material used to frame the tops of the posts should be 1" by 4" boards.
Silt fence fabric and support backing should be attached to the wooden posts and frame with staples, wire, zip ties, or nails.

Placement:

Place a silt fence drop inlet barrier in a location where it is unlikely to be overtopped.
Water should flow through silt fence, not over it. Silt fence barriers for area inlets often fail when repeatedly overtopped.
When used as a barrier for area inlets, silt fence fabric and posts must be supported at the top by a wooden frame.
When a silt fence barrier for area inlets is located near an inlet that has steep approach slopes, the storage capacity behind the barrier is drastically reduced. Timely removal of sediment must occur for a barrier to operate properly in this location.

Proper installation method:

Excavate a trench around the perimeter of the area inlet that is at least 8" deep by 8" wide.
Drive posts to a depth of at least 18" around the perimeter of the area inlet.
The distance between posts should be 4' or less. If the distance between two adjacent corner posts is more than 4', add another post(s) between them.
Connect the tops of all the posts with a wooden frame made of 1" by 4" boards. Use nails or screws for fastening.
Attach the wire or polymeric-mesh backing to the outside of the post/frame structure with staples, wire, zip ties, or nails.
Roll out a continuous length of silt fence fabric long enough to wrap around the perimeter of the area inlet. Add more length for overlapping the fabric joint. Place the edge of the fabric in the trench, starting at the outside edge of the trench. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt fence fabric should remain exposed.
Attach the silt fence to the outside of the post/frame structure with staples, wire, zip ties, or nails. The joint should be overlapped to the next post.

Note: When a silt fence barrier for area inlet is placed in a shallow median ditch, make sure that the top of the barrier is not higher than the paved road. In this configuration, water may spread onto the roadway causing a hazardous condition.

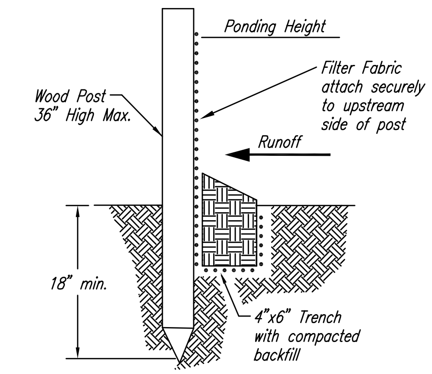
List of common placement/installation mistakes to avoid:

Water should flow through a silt fence barrier for area inlet-not over it. Place a silt fence barrier for area inlet in a location where it is unlikely to be overtopped. Silt fence barrier for area inlets often fail when repeatedly overtopped.
Do not place posts on the outside of the silt fence barrier for area inlet. In this configuration, the force of the water is not resisted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail.
Do not install silt fence barrier for area inlets without framing the top of the posts.
The corner posts around area inlets are stressed in two directions whereas a normal silt fence is only stressed in one direction. This added stress requires more support.

Inspection and Maintenance:

Silt fence barrier for area inlets should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Does water flow under the silt fence?
Does the silt fence sag excessively?
Has the silt fence torn or become detached from the posts?
Does sediment need to be removed from behind the area inlet barrier?



SILT FENCE BARRIERS

Material Specification:

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

Placement:

A slope barrier should be used at the toe of a slope when a ditch does not exist. The slope barrier should be placed on nearly level ground 5' to 10' away from the toe of a slope. The barrier is placed away from the toe of the slope to provide adequate storage for settling out sediment.
When practicable, silt fence slope barriers should be placed along contours to avoid a concentration of flow.
Silt fence slope barriers can also be placed along right-of-way fence lines to keep sediment from crossing onto adjacent property. When placed in this manner, the slope barrier will not likely follow contours.

Proper installation method:

Excavate a trench the length of the planned slope barrier that is 6" deep by 4" wide.
Make sure that the trench is excavated along a single contour. When practicable, slope barriers should be placed along contours to avoid a concentration of flow. Place the soil on the upslope side of the trench for later use.
Roll out a continuous length of silt fence fabric on the downslope side of the trench.
Place the edge of the fabric in the trench starting at the top upslope edge. Line all three sides of the trench with the fabric. Backfill over the fabric in the trench with the excavated soil and compact. After filling the trench, approximately 24" to 36" of silt-fence fabric should remain exposed.
Lay the exposed silt fence upslope of the trench to clear an area for driving in the posts.
Just downslope of the trench, drive posts into the ground to a depth of at least 18".
Place posts no more than 4' apart.
Attach the silt fence to the anchored post with staples, wire, zip ties, or nails.

List of common placement/installation mistakes to avoid:

When practicable, do not place silt fence slope barriers across contours. Slope barriers should be placed along contours to avoid a concentration of flow. When the flow concentrates, it overtops the barrier and the silt fence slope barrier quickly deteriorates.
Do not place silt-fence posts on the upslope side of the silt fence fabric. In this configuration, the force of the water is not restricted by the posts, but only by the staples (wire, zip ties, nails, etc.). The silt fence will rip and fail.
Do not place silt fence slope barriers in areas with shallow soils underlain by rock. If the barrier is not sufficiently anchored, it will wash out.
Silt fence slope barriers must be dug into the ground-silt fence at ground level does not work because water will flow underneath.

Inspection and Maintenance:

Silt fence slope barriers should be inspected every 7 days and within 24 hours of a rainfall of 1/2" or more. The following is a list of questions that should be addressed during each inspection:

Are there any points along the slope barrier where water is concentrating?
Does water flow under the slope barrier?
Do the silt fences sag excessively?
Has the silt fence torn or become detached from the posts?
Does sediment need to be removed from behind the slope barrier?

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CITY OF WICHITA PUBLIC WORKS ENGINEERING

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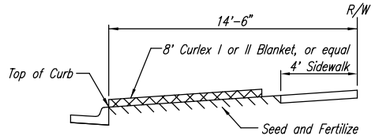
SOIL EROSION BMPs

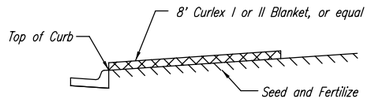
SILT FENCE DITCH CHECK AND BARRIER DETAILS

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

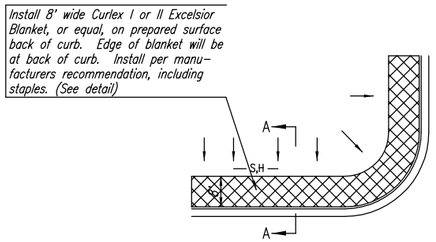
PROJECT NUMBER	INDEX CODE
PPP #188	607879
DATE May 2008	Sheet 29 of 33



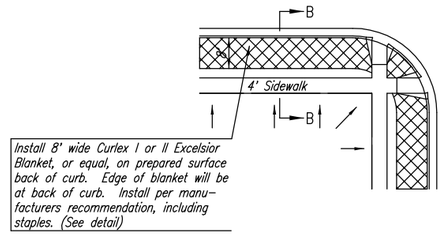
SECTION B–B



SECTION A–A



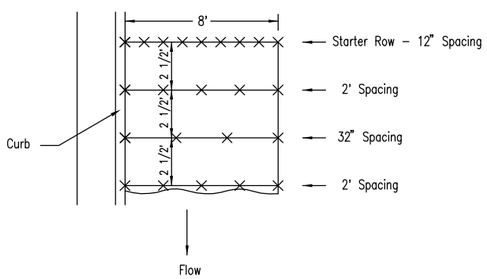
SOUTH STREET

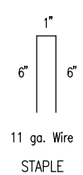


NOTES:

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



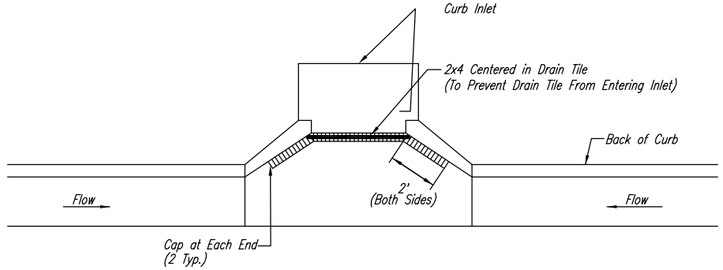


STAPLE

STAPLE PATTERN

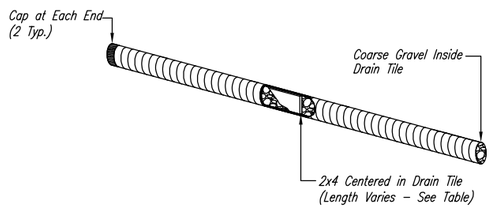
NOTES: Use 6" seam overlap

DETAILS FOR CURLEX I OR II BLANKETS



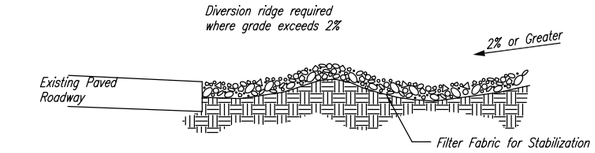
Note:
Place 4" perforated PVC pipe, filled with 1/2"–1" dia. gravel, in front of curb inlet as shown.

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

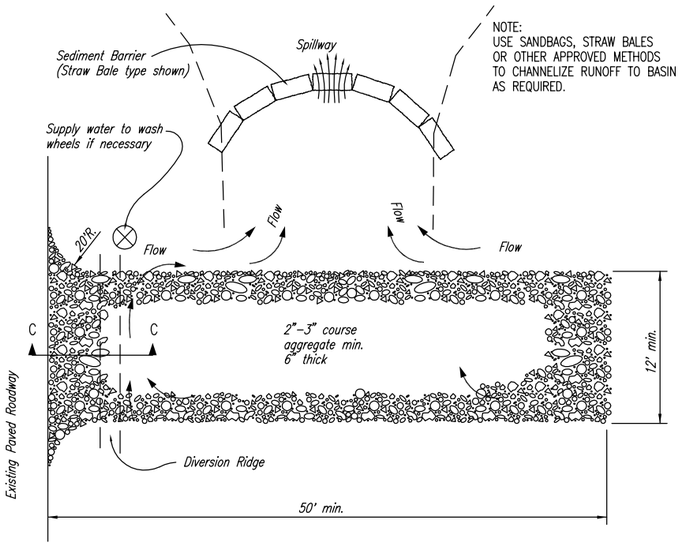


CURB INLET PROTECTION

4" PERFORATED PIPE W/ GRAVEL



SECTION C–C



STABILIZED CONSTRUCTION ENTRANCE

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.

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CITY OF WICHITA
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SOIL EROSION BMPs

BACK OF CURB PROTECTION, CURB INLET PROTECTION AND CONSTRUCTION ENTRANCE

JAMES L. ARMOUR, P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
PPP #188	607879
DATE: May 2008	Sheet 30 of 33

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.

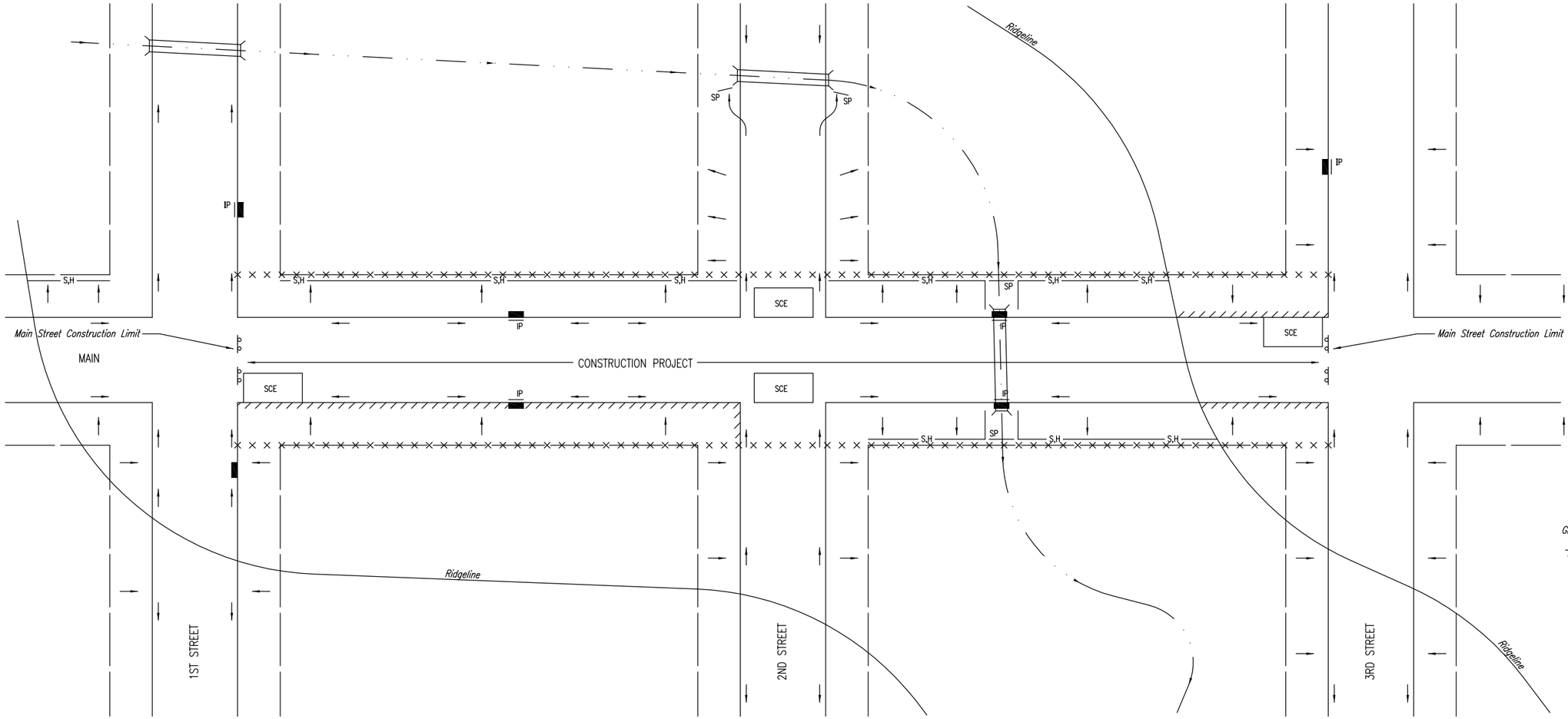
2. EROSION CONTROL DEVICES MUST BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PROCESS AND UNTIL THE DISTURBED EARTH IS RESTABILIZED.

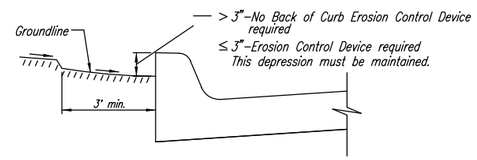
3. IF THE PROJECT WILL DISTURB 1 ACRE OR MORE, A FEDERAL/STATE NPDES STORMWATER PERMIT IS REQUIRED. A DETAILED STORMWATER POLLUTION PREVENTION PLAN, IS REQUIRED. THE EROSION CONTROL DEVICES SHOWN ON THIS SHEET ARE CONSIDERED TO BE THE MINIMUM TO BE SHOWN IN THE POLLUTION PREVENTION PLAN.

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

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

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 CURLEX I OR II EXCELSIOR BLANKET, OR EQUAL. 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)

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SOIL EROSION BMPs

STREET IMPROVEMENT PROJECTS

JAMES L. ARMOUR, P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
PPP #188	607879
DATE: May 2008	Sheet 31 of 33

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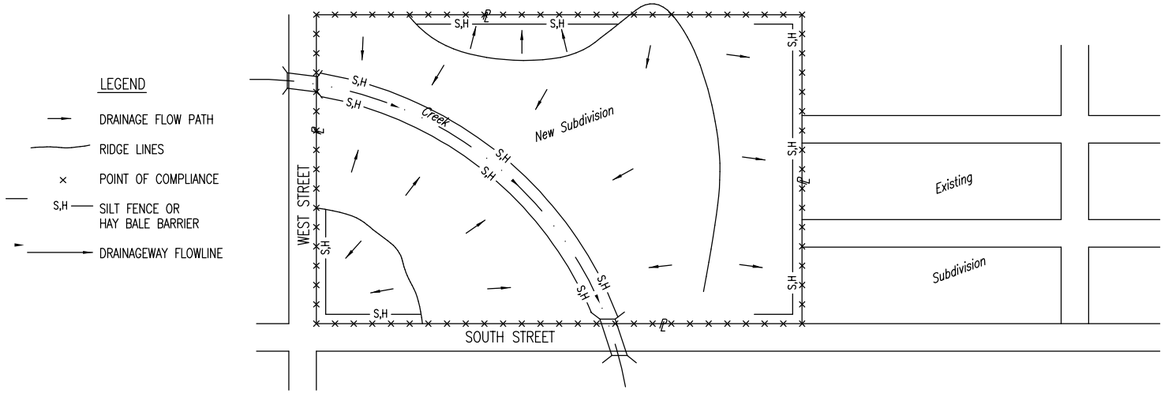
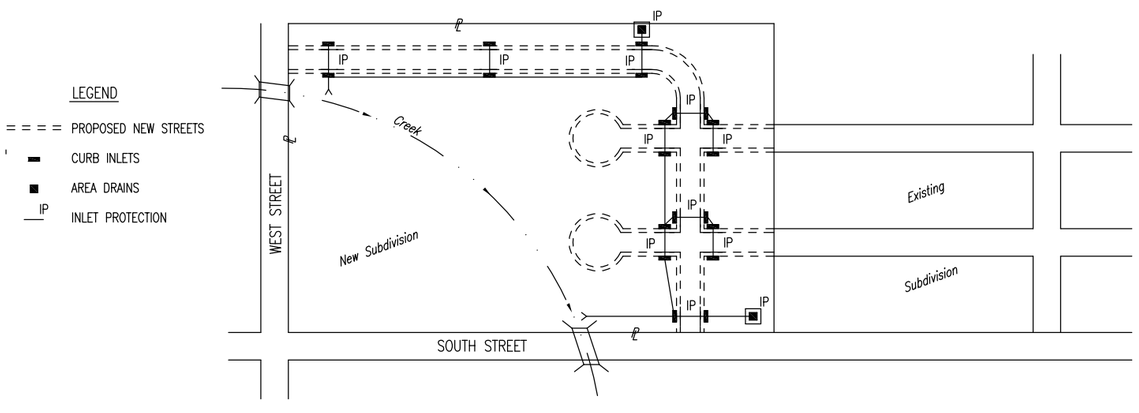
PHASE 1 – INITIAL EARTHWORK AND UTILITIES (EXCEPT STORM SEWER)



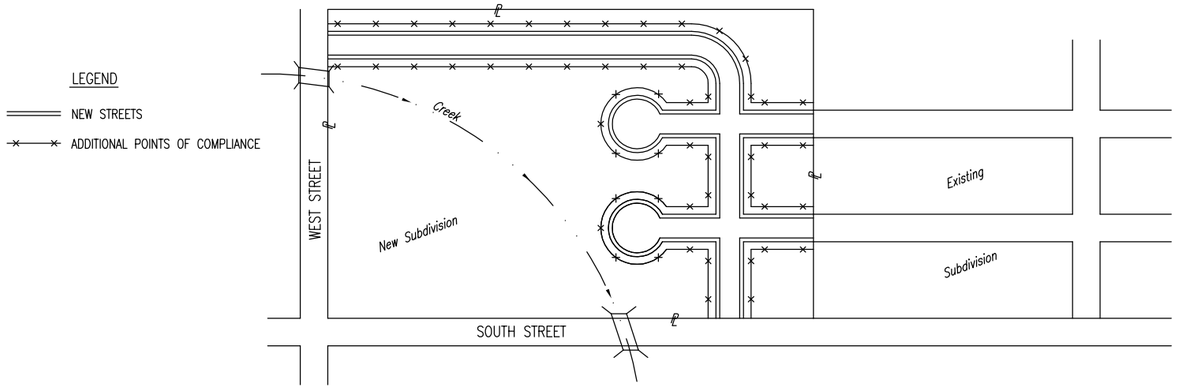
1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, THE POINTS OF COMPLIANCE ARE THE PERIMETER BOUNDARIES AND ANY DRAINAGE WAYS OR STORM SEWERS DRAINING THROUGH OR FROM THE SITE. SHOULD LAKES BE CONSTRUCTED WITHIN THE SUBDIVISION THAT WILL DISCHARGE DURING STORMS, THEY ARE ALSO A POINT OF COMPLIANCE.
2.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

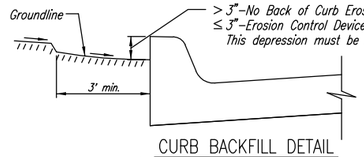


1. DURING THIS PHASE OF SUBDIVISION CONSTRUCTION, NEW STREETS ARE INSTALLED. ALL EROSION CONTROL DEVICES INSTALLED DURING PHASE 1 AND 2 MUST STILL BE MAINTAINED. THE POINT OF COMPLIANCE NOW SHIFTS TO THE BACK OF CURB ALONG EACH STREET.
2. CURB OPENING INLET PROTECTION:
   A. SUMP AREAS – INLET PROTECTION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

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CITY OF WICHITA
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SOIL EROSION BMPs

SUBDIVISION DEVELOPMENT PROCESS

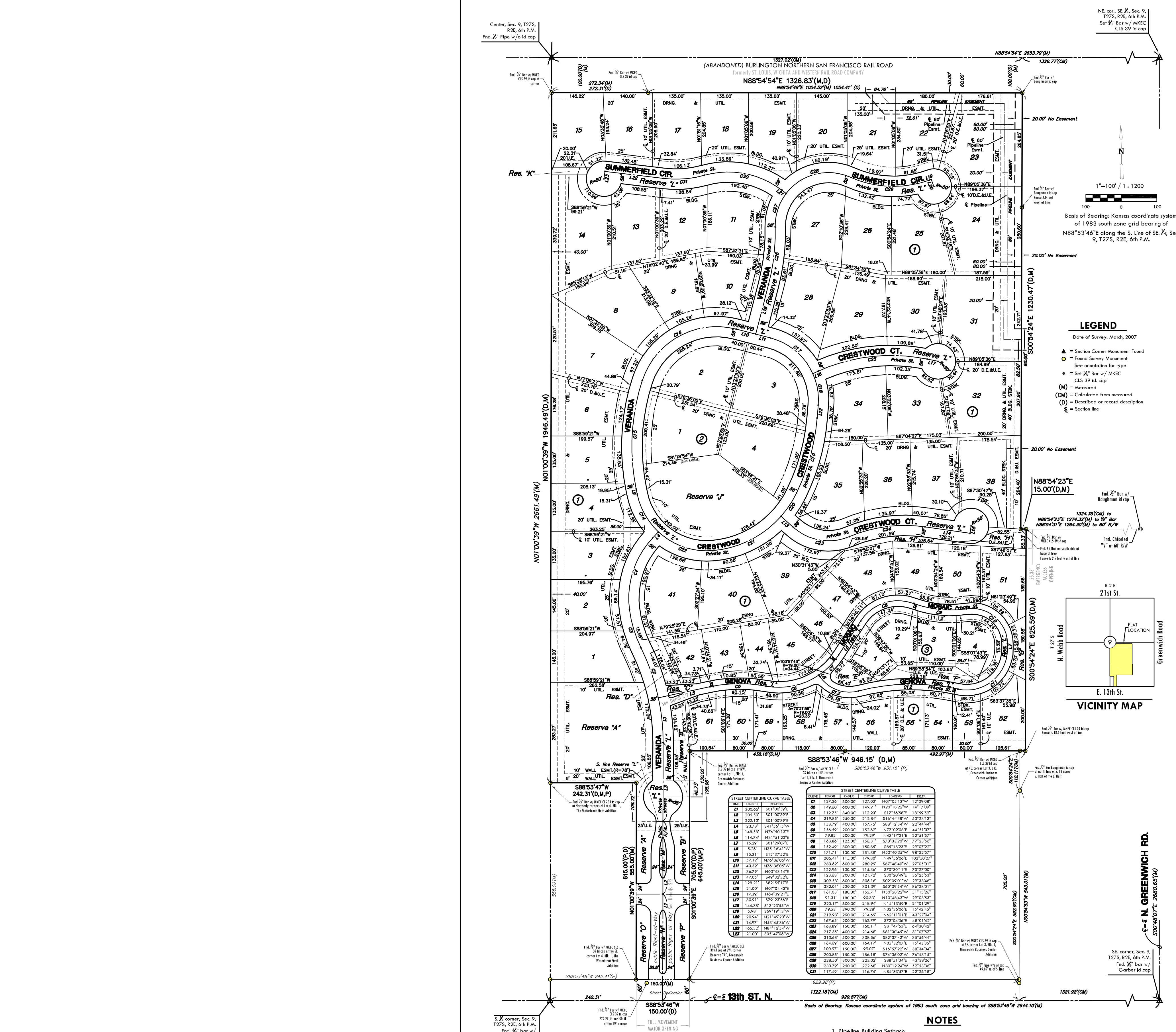
JAMES L. ARMOUR, P.E. – CITY ENGINEER

PROJECT NUMBER	INDEX CODE
PPP #188	607879
DATE: May 2008	Sheet 32 of 33

FINAL PLAT

THE WATERFRONT RESIDENTIAL ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



LEGEND

Date of Survey: March, 2007

- ▲ = Section Corner Monument Found
- ○ = Found Survey Monument. See annotation for type
- • = Set ⅝" Bar w/ MKEC CLS 39 id. cap
- (M) = Measured
- (CM) = Calculated from measured
- (D) = Described or record description
- ℄ = Section line

STREET CENTERLINE CURVE TABLE

LINE	LENGTH	BEARING
L1	300.66'	S01°00'39"E
L2	205.50'	S01°00'39"E
L3	222.13'	S01°00'39"E
L4	23.78'	S41°56'15"W
L5	148.58'	N76°50'13"E
L6	114.74'	N31°51'22"E
L7	15.29'	S01°29'07"E
L8	5.26'	N35°16'41"W
L9	15.31'	S12°37'52"E
L10	57.12'	N76°36'05"W
L11	43.32'	N76°36'05"W
L12	36.79'	N03°43'14"E
L13	47.05'	S49°32'32"E
L14	128.21'	S82°55'17"E
L15	21.00'	N07°04'43"E
L16	17.39'	N64°39'21"E
L17	30.91'	S79°23'56"E
L18	144.38'	S13°23'55"W
L19	5.98'	S69°19'13"W
L20	20.94'	N21°49'20"W
L21	14.97'	N53°45'36"W
L22	165.32'	N84°12'54"W
L23	21.00'	S05°47'06"W

STREET CENTERLINE CURVE TABLE

CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C1	127.26'	600.00'	127.02'	N07°05'13"W	12°09'08"
C2	149.60'	600.00'	149.21'	N20°18'22"W	14°17'09"
C3	112.75'	340.00'	112.23'	S17°56'58"E	18°59'59"
C4	219.85'	250.00'	212.84'	S16°44'38"W	50°23'13"
C5	158.79'	400.00'	157.75'	S88°12'34"W	22°44'44"
C6	156.59'	200.00'	152.62'	N77°09'08"E	44°51'37"
C7	79.82'	200.00'	79.29'	N43°17'21"E	22°51'57"
C8	168.86'	125.00'	156.31'	S70°33'20"W	77°23'56"
C9	152.49'	300.00'	150.85'	S85°18'23"E	29°07'22"
C10	171.71'	100.00'	151.38'	N50°40'35"W	98°22'57"
C11	206.41'	115.00'	179.80'	N49°56'06"E	102°50'27"
C12	283.62'	600.00'	280.99'	S87°48'49"W	27°05'01"
C13	122.96'	100.00'	115.36'	S70°30'11"E	70°27'00"
C14	123.68'	200.00'	121.72'	S30°20'49"E	35°25'53"
C15	309.58'	600.00'	306.16'	S02°09'01"W	29°33'46"
C16	332.01'	220.00'	301.39'	S60°09'54"W	86°28'01"
C17	161.03'	180.00'	155.71'	N50°58'22"W	51°15'26"
C18	91.31'	180.00'	90.33'	N10°48'43"W	29°03'53"
C19	220.17'	600.00'	218.94'	N14°13'59"E	21°01'29"
C20	79.53'	290.00'	79.28'	N32°36'06"E	15°42'45"
C21	219.93'	290.00'	214.69'	N62°11'01"E	43°27'04"
C22	167.65'	200.00'	162.79'	S72°04'36"E	48°01'42"
C23	168.89'	150.00'	160.11'	S81°47'53"E	64°30'42"
C24	217.35'	400.00'	214.68'	S81°30'45"W	31°07'57"
C25	313.68'	500.00'	308.56'	S82°37'42"W	35°56'44"
C26	164.69'	600.00'	164.17'	N05°32'07"E	15°43'35"
C27	100.97'	150.00'	99.07'	S16°57'22"W	38°34'04"
C28	200.85'	150.00'	186.18'	S74°36'02"W	76°43'15"
C29	228.50'	300.00'	223.02'	S88°51'34"E	43°38'26"
C30	230.79'	250.00'	222.68'	N80°12'24"W	52°53'36"
C31	117.49'	300.00'	116.74'	N84°33'57"E	22°26'18"

NOTES

1. Pipeline Building Setback:
No habitable structure will be built within 50 feet of the pipeline unless the landowner agrees to pay the cost of lowering the pipeline, and or provide the appropriate cover to comply with Department of Transportation regulations, and or unless approved by the pipeline company.

2. Street Drainage Easements:
Along Genova Street and Mosaic where there is 32' of right-of-way a 15' street drainage, and utility easement is provided abutting and adjoining the 32' right-of-way as indicated.

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