STREET IMPROVEMENTS FOR

DUGAN ROAD

FROM THE NORTH LINE OF KELLOGG DRIVE TO THE NORTH LINE OF TAFT

PROJECT NO.

472-76-245-81488-000-000-001

INCLUDING TRIPLE 3'X4' REINFORCED CONCRETE BOX CONSTRUCTION

1. Utility service lines, poles, valve boxes, meters, and etcetera are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.

2. A raw cut of at least one-half the depth of 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 course or pavement for which partial removal of that surface or pavement is required. Sawed 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 the surface or pavement.

3. 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.

4. Properties within the project limits may have underground sprinkler systems in public right-of-way which conflict with new construction. Contractor will be required to remove such improvements should they not be removed by their owner at the time of construction of the project. The Contractor will be required to salvage all sprinkler heads and/or valves and give such material to their owner. Portions of underground sprinkler systems not in conflict with new construction shall be protected from damage and shall remain in place. All work in connection with underground sprinkler systems shall be considered as subsidiary to the contract pay items of work.

5. No more than 8 drives 35' feet in width, or equivalent combinations thereof, are to constructed with this project.

6. Widened gutter section of combined curb and gutter at intersections will not be paid for directly, and this cost shall be considered as subsidiary to the other contract pay items of work.

7. Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.

8. Limits of earthwork shall match existing ground elevations at the right-of-way line unless otherwise noted on the plans with a new finished grade elevation. When a new finished grade elevation is shown, the earthwork shall extend one foot beyond the right-of-way line and then sloped up or down using permissable slopes to match the existing ground surface.

9. All entrance and cross road pipe within the project limits shall be removed by the Contractor unless otherwise noted on the plans. Removal of such pipes shall conform to the applicable section of the Standard Specifications.

10. Contractor shall give property owners abutting this project, whose yards will be lower than the new finished grade elevations at the right-of-way line, an opportunity to utilize excess excavated material from the project to regrade their yards to drain to the new pavement. Contractor will be required to dump and spread the excess material as required by the specification when requested by the property owner. The Contractor shall ascertain that a dirt order form has been properly executed by the property owner before any such excess material is delivered to such properties.

11. 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 or a licensed professional engineer in accordance with state laws.

12. Removal of existing concrete parking lot pavements, asphalt parking lot pavements, asphalt driveway pavements and/or asphalt sidewalk pavements will be paid for as square feet of walk and drive removed.

13. Construction of asphalt parking lot pavement shall be paid for at the unit price bid per square yard of 6" asphalt parking lot construction (4" bituminous base).

14. Construction of concrete parking lot pavement will be paid as square feet of drive for the thickness indicated.

15. Driveway widths and locations shown on the plan are tentative. Contractor will be required to obtain properly executed driveway request form signed by property owner or his authorized representative verifying such driveway widths and locations. Such forms shall be submitted to the Engineer for his review and approval.

16. The Contractor shall give all property owners and/or tenants of developed property abutting the project limits a minimum of ten (10) days advance notice prior to start of construction.

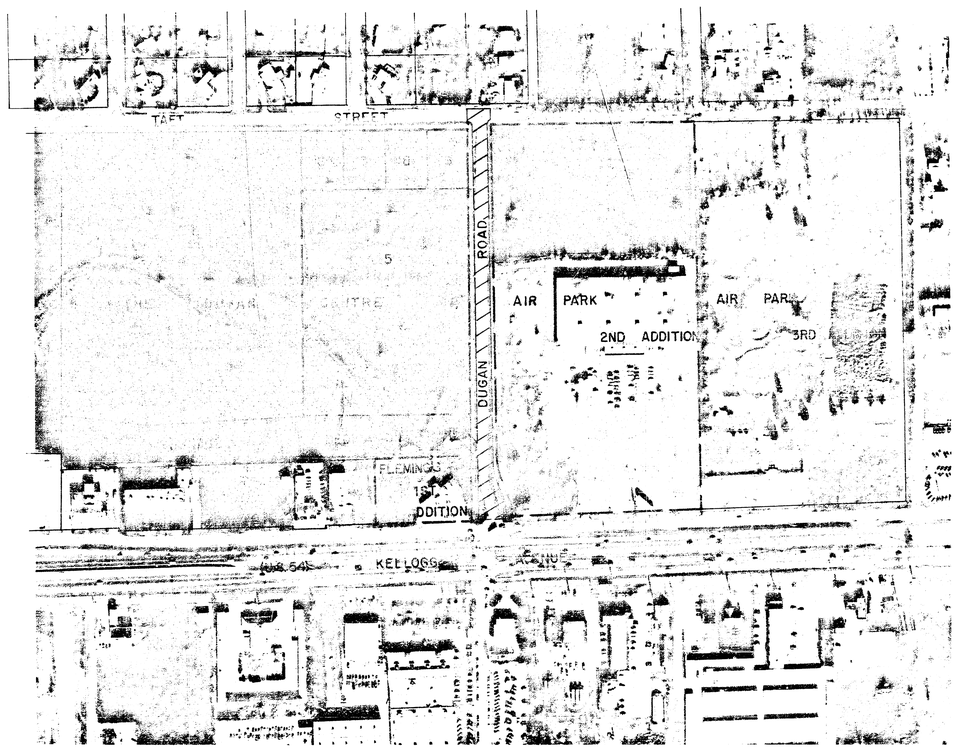
17. Sanitary sewer manhole rings to be adjusted shall be replaced with new type City of Wichita Standard castings.

18. It is imperative that construction of this project be coordinated with the following projects:

TAFT STREET IMPROVEMENTS	PROJ. NO. 472-76-245-81488-000-000-001
WATER MAIN EXTENSION	PROJ. NO. 448-76-245-76245-006-000-001
LATERAL 40, MAIN 4, SWI	PROJ. NO. 469-76-245-81593-000-000-001
STORM WATER SEWER #315	PROJ. NO. 468-76-245-81583-000-000-001

19. The City of Wichita is in the process of making arrangements to stockpile necessary material to construct fill on this project. Tentative location of the stockpile will be within the project limits and not more than 500 feet from Dugan Road. Should the City be successful in completing these arrangements, the quantity included in the Proposal for Borrow Excavation (Contractor furnished) will be underrun in part. Payment for transporting the stockpile to the roadway will be measured and paid for as Excavation, resulting in an overrun of the quantity in the Proposal for this work.

20. Interurban traffic generated outside the project area is not to be carried through construction. Local business traffic generated within the project area is to be carried through construction



IMPROVEMENT DISTRICT

INDEX

1	COVER SHEET AND GENERAL NOTES
2-3	TYPICAL SECTIONS
4	MISCELLANEOUS DETAILS
5	PAVEMENT DETAILS
6-8	DUGAN ROAD PLAN SHEETS
9-11	TRIPLE 9x4 CONCRETE BOX DETAILS
12	MANHOLE ADJUSTMENT DETAILS
13	DROP INLET DETAILS
14	DRIVEWAY APPROACH DETAILS
15-18	EARTHWORK CROSS SECTION SHEETS

CITY OF WICHITA, KANSAS

MICHAEL E. LINDEBAK

CITY ENGINEER

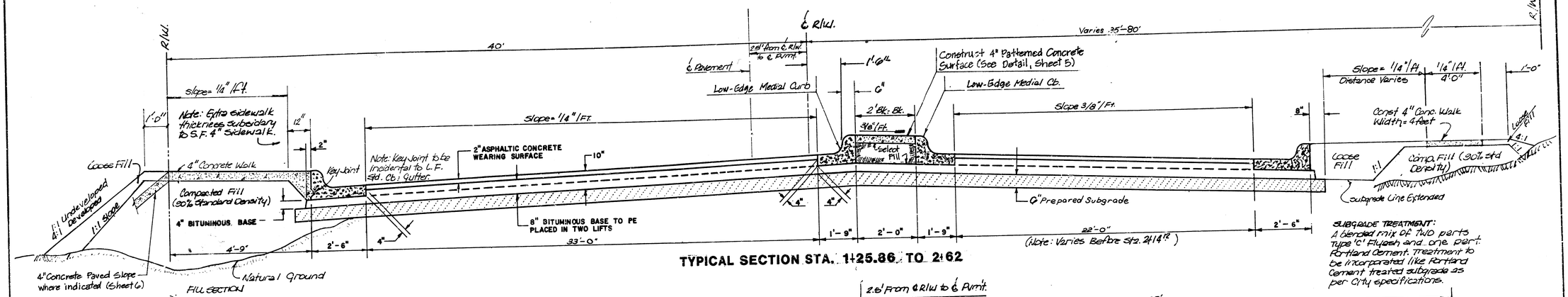
NOVEMBER 1986 1/18

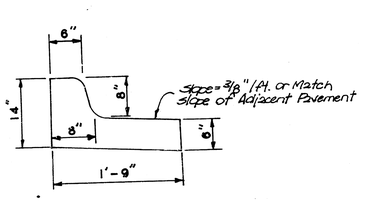
REVISED SHEETS 5,6 FEBRUARY 16, 1987

Revised Sheets 4,5,6,8,11,15 December 5, 1986

BAUGHMAN COMPANY, P.A.
SURVEYORS & ENGINEERS
WICHITA · ARKANSAS CITY · ELDORADO · HUTCHINSON · PRATT · HAYS · SALINA · MANHATTAN · EMPORIA · PARSONS · CHANUTE · IOLA · INDEPENDENCE · COFFEYVILLE · BARTLESVILLE · BLACKWELL · PONCA CITY · ENID · GUTHRIE · OKLAHOMA CITY · EDMOND · SHAWNEE · CHICKASHA · ARDMORE · DURANT

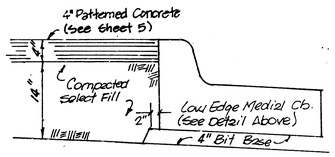
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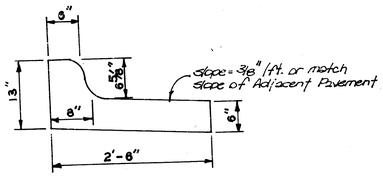


LOW-EDGE MEDIAL CURB

NOTE: LOW EDGE CURB, HIGH EDGE CB. & SOLID CONCRETE MEDIAN NOSE TO BE PAID FOR AS L.F. MEDIAN COMBINED CURB & GUTTER (B5).

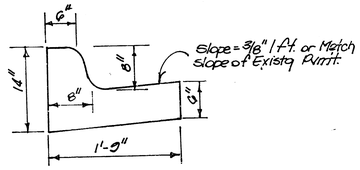


TRAFFIC ISLAND DETAIL

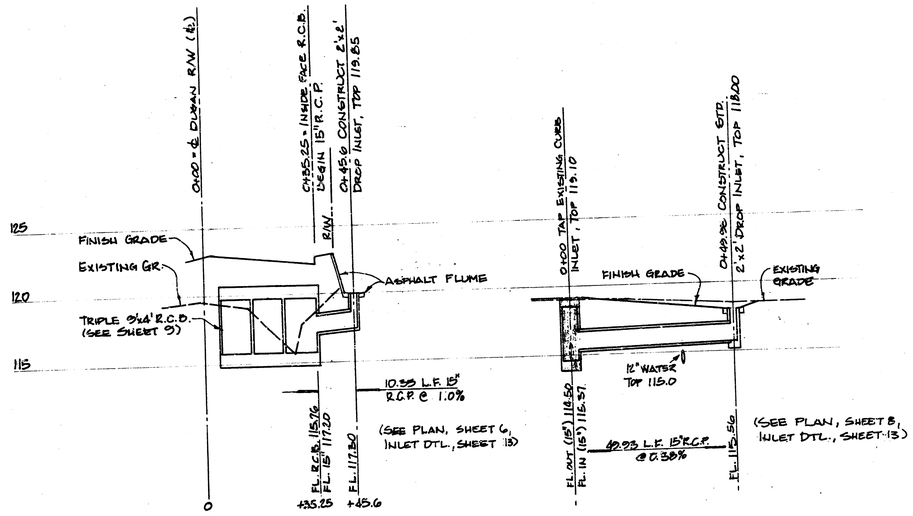


LOW EDGE CURB AND GUTTER

NOTE: STANDARD, NON-STANDARD, AND TRANSITION TO BE PAID FOR AS L.F. COMBINED CURB & GUTTER (G5/8" & 1'-2").



HIGH EDGE MEDIAL CURB



PARKING LOT DRAIN PROFILE STA. 3+17

AREA INLET DRAIN PROFILE STA. 13+43.68

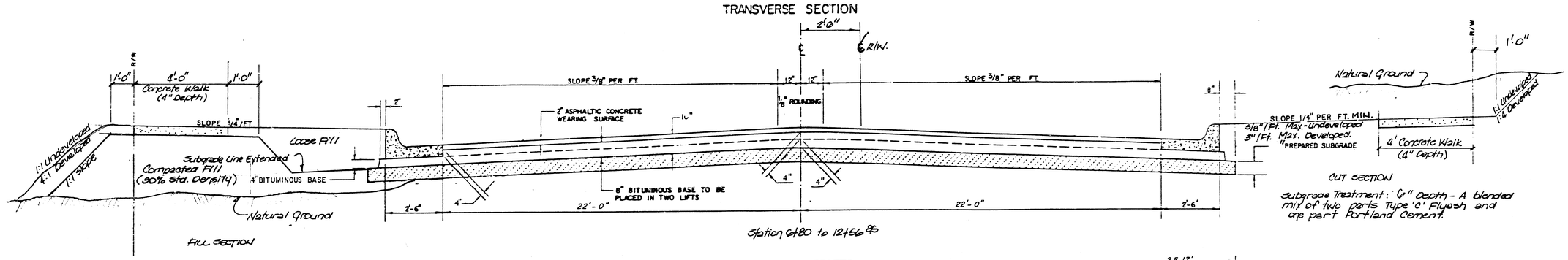
TYPICAL SECTIONS AND DETAILS 2/18

472-76-245-81488-000-000-001

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TYPICAL 49' PAVEMENT DETAILS

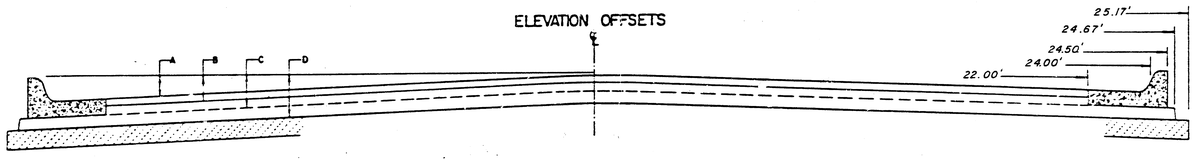
TRANSVERSE SECTION



Station 6+80 to 12+56.85

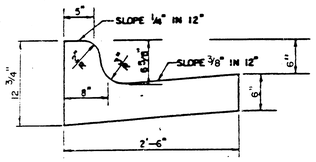
Subgrade Treatment: 6" Depth - A blended mix of two parts Type 'A' Flyash and one part Portland Cement.

ELEVATION OFFSETS



	DISTANCE FROM CENTERLINE (LT. & RT.)															
	0	2	4	6	8	10	12	14	16	18	20	22	24	24.5	24.67	25.17
A: TOP OF CURBS TO TOP OF SURFACE LIFT	-0.18	-0.11	-0.05	0.01	0.07	0.14	0.20	0.26	0.32	0.39	0.45	0.51	——	——	——	——
B: TOP OF CURBS TO TOP OF UPPER BASE LIFT	-0.01	0.05	0.11	0.18	0.24	0.30	0.36	0.43	0.49	0.55	0.61	0.68	——	——	——	——
C: TOP OF CURBS TO TOP OF LOWER BASE LIFT	0.32	0.39	0.45	0.51	0.57	0.64	0.70	0.76	0.82	0.89	0.95	1.01	1.07	1.09	1.09	——
D: TOP OF CURBS TO TOP OF SUBGRADE	0.66	0.72	0.78	0.84	0.91	0.97	1.03	1.09	1.16	1.22	1.28	1.34	1.41	1.42	1.43	1.44

COMBINED CURB & GUTTER



GENERAL NOTES

1) THE ASPHALTIC CONCRETE PAVEMENT BETWEEN THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 10" ASPHALTIC CONCRETE (8" BITUMINOUS BASE).

2) THE BITUMINOUS BASE UNDER AND BEHIND THE COMBINED CURB AND GUTTER SHALL BE PAID AS SQUARE YARDS OF 4" BITUMINOUS BASE.

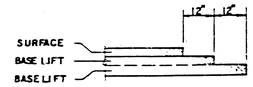
3) A TACK COAT OF EMULSIFIED ASPHALT (SC-1H OR CSS-1H) SHALL BE APPLIED AT AN APPROXIMATE RATE OF 0.05 GALLONS PER SQUARE YARD BETWEEN EACH LIFT OF ASPHALTIC MATERIAL.

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

5) 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.

6) CONTRACTOR TO BID ONLY ONE SUBGRADE TREATMENT ALTERNATE WHEN ALTERNATES ARE PROVIDED IN THE PROPOSAL AND CONTRACT. THE ALTERNATE CHOSEN BY THE SUCCESSFUL BIDDER SHALL BE USED IN CONSTRUCTING THIS PROJECT.

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 10" ASPHALTIC CONCRETE (8" BITUMINOUS BASE).

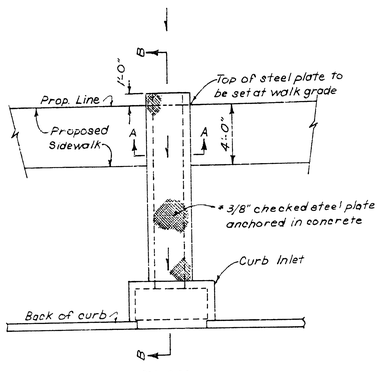
TYPICAL SECTION
STA. 6+80 to 12+56.85

3/18

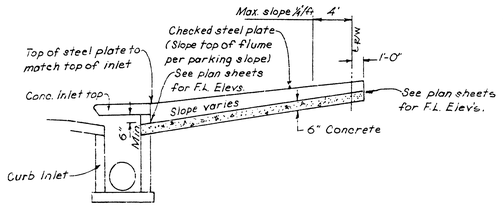
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PLAN



SECTION B-B

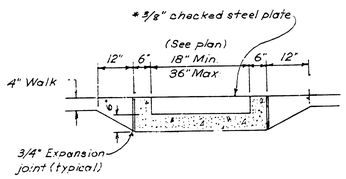
STATION: 10+33.31 RIGHT

DETAIL OF CONCRETE FLUME TO INLET

* Checked steel plates shall have a raised lug pattern and shall be either shop or field painted with one coat of zinc dust paint followed by two field coats of aluminum paint (top & bottom). Steel shall comply with ASTM A-36, A242, or A441.

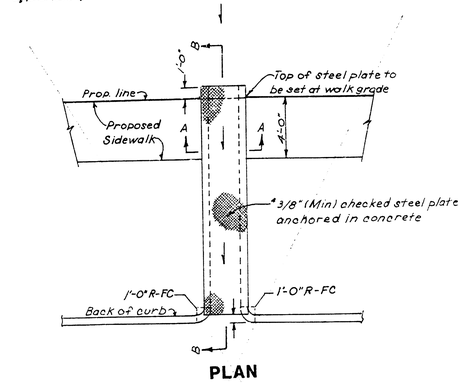
Cost of all work included in the bid price for std. covered flume construction shall include removing and re-constructing existing Conc. Gutter, compaction of subgrade, and necessary area grading.

Cost of steel plate & painting to be included in bid price for L.F. Standard Covered Concrete Flume Construction.

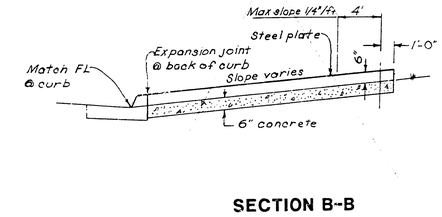


SECTION A-A

Steel plate to be anchored with 1/4" x 2 1/4" Flat head screws with Expansion Anchor on 2'0" Max. Ctrs.

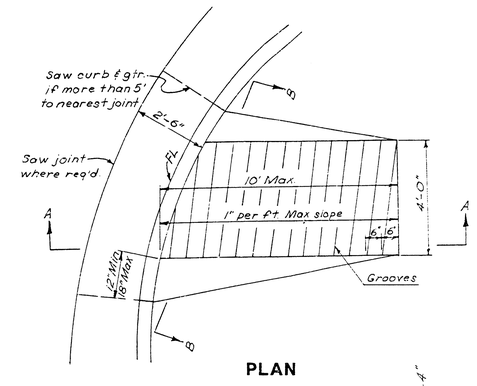


PLAN

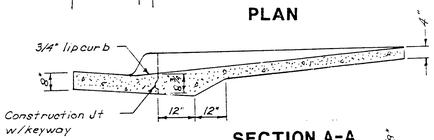


SECTION B-B

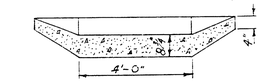
DETAIL OF CONCRETE FLUME TO CURB



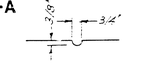
PLAN



SECTION A-A



SECTION B-B



GROOVE DETAIL

WHEELCHAIR RAMP

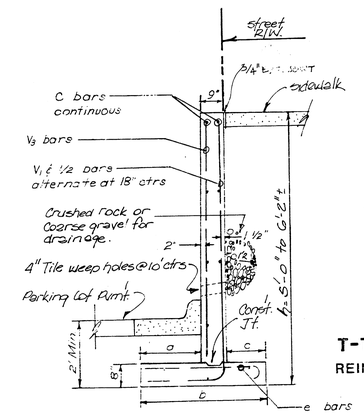
NOTES FOR HANDRAIL CONSTRUCTION

1. All guardrail shall be constructed with Schedule 40 Steel Pipe.
2. The top rail shall be saddled on the support posts with a full weld.
3. The middle rails shall be saddled and full welded to the support posts.
4. All guardrail shall be painted in the following manner:
   1 coat of Zinc dust primer
   2 coats of Aluminum Paint
   Both to be applied as per City Specifications.
5. Handrails shall run from station 3+26 to 5+22, and from station 5+62 to 6+23 on the right side of Dugan Road.

REINFORCING STEEL SCHEDULE

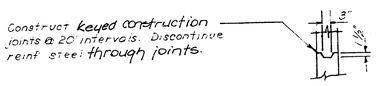
T TYPE RETAINING WALL

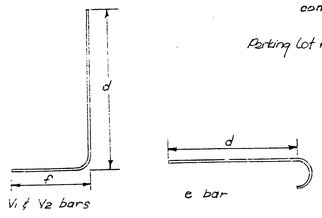
5'-0"	V1	1/2"	6'-3"	36"	4'-9"	1'-6"	L shape
	V2	"	4'-3"	24"	2'-9"	1'-6"	"
	V3	"	4'-0"	24"			Straight
	e	"	3'-0"	18"	2'-2"		⟶
	C	"	9 bars	continuous			Straight
5'-6"	V1	1/2"	6'-9"	36"	3'-4"	1'-6"	L Shape
	V2	"	4'-9"	36"	3'-4"	1'-6"	"
	V3	"	4'-6"	24"			Straight
	e	"	3'-6"	18"	2'-2"		⟶
	C	"	9 bars	continuous			Straight
6'-0"	V1	1/2"	7'-3"	24"	5'-6"	1'-8"	L Shape
	V2	"	5'-0"	24"	3'-3"	1'-8"	"
	V3	"	5'-0"	24"			Straight
	e	"	3'-6"	18"	2'-10"		⟶
	C	"	10 bars	continuous			Straight
6'-0"	V1	3/4"	7'-9"	24"	6'-2"	1'-8"	L Shape
	V2	"	5'-0"	24"	3'-5"	1'-8"	"
	V3	1/2"	5'-6"	24"			Straight
	e	"	3'-6"	18"	2'-10"		⟶
	C	"	10 bars	continuous			Straight
7'-0"	V1	3/4"	8'-0"	24"	6'-7"	2'-6"	L Shape
	V2	"	6'-0"	24"	3'-7"	2'-6"	"
	V3	1/2"	6'-0"	28"			Straight
	e	"	4'-3"	12"	3'-7"		⟶
	C	"	10 bars	continuous			Straight



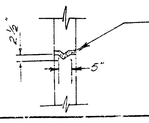
T-TYPE WALL

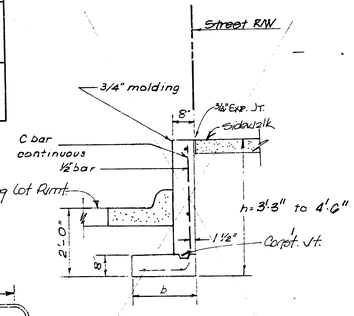
REINF. CONCRETE





DIMENSIONS				Per Lin. Ft. of Wall	
h	b	a	c	C.Y. Conc.	Ft. Wall
5'-0"	2'-9"	1'-0"	1'-0"	8.423	0.188
5'-6"	2'-9"	1'-0"	1'-0"	11.030	0.208
6'-0"	3'-3"	1'-3"	1'-3"	13.995	0.229
6'-6"	3'-3"	1'-3"	1'-3"	14.135	0.243
7'-0"	4'-0"	2'-0"	1'-3"	18.282	0.275



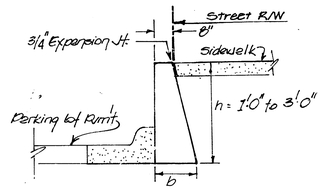


L-TYPE WALL

REINF. CONCRETE

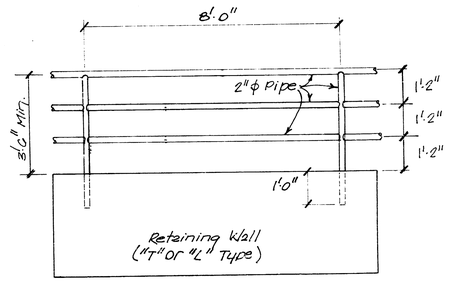
NOTE: TOP ELEVATIONS OF RETAINING WALLS TO MATCH WALK GRADES INDICATED ON PLAN SHEETS 6 & 7.

GRAVITY TYPE RETAINING WALL		
DIMENSIONS		C.Y. Conc.
h	b	per ft.
1'-0"	13"	0.033
1'-3"	13"	0.041
1'-6"	13"	0.049
1'-9"	15"	0.057
2'-0"	15"	0.071
2'-3"	17"	0.087
2'-6"	19"	0.105
2'-9"	20½"	0.121
3'-0"	22"	0.139
3'-3"	26"	0.171
3'-6"	27"	0.189
3'-9"	29"	0.215
4'-0"	31"	0.241



GRAVITY TYPE RETAINING WALL

HANDRAIL DETAIL FOR RETAINING WALLS



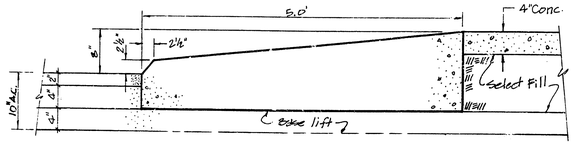
Revised T-type & Gravity Retaining wall height. 12-5-86

MISCELLANEOUS DETAILS 4/18

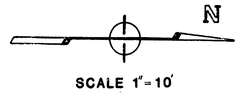
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4/18

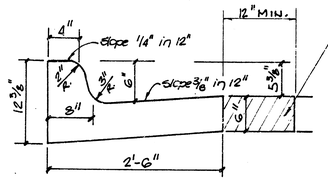
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SECTION A-A
CONCRETE RAMP MEDIAN END

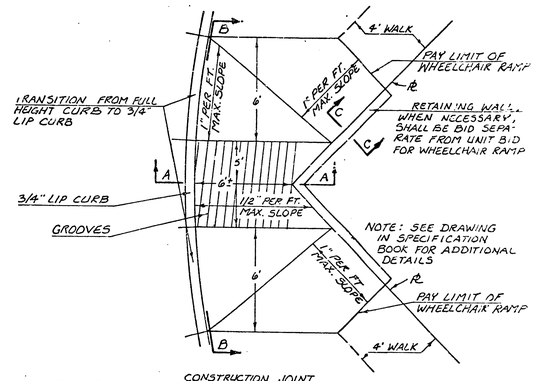


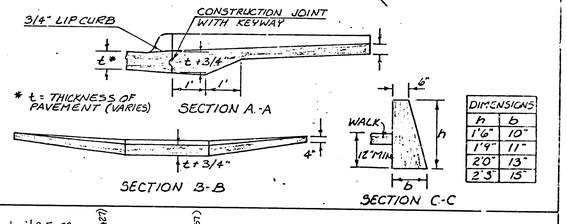
SCALE 1"=10'



PARKING LOT CURB DETAIL

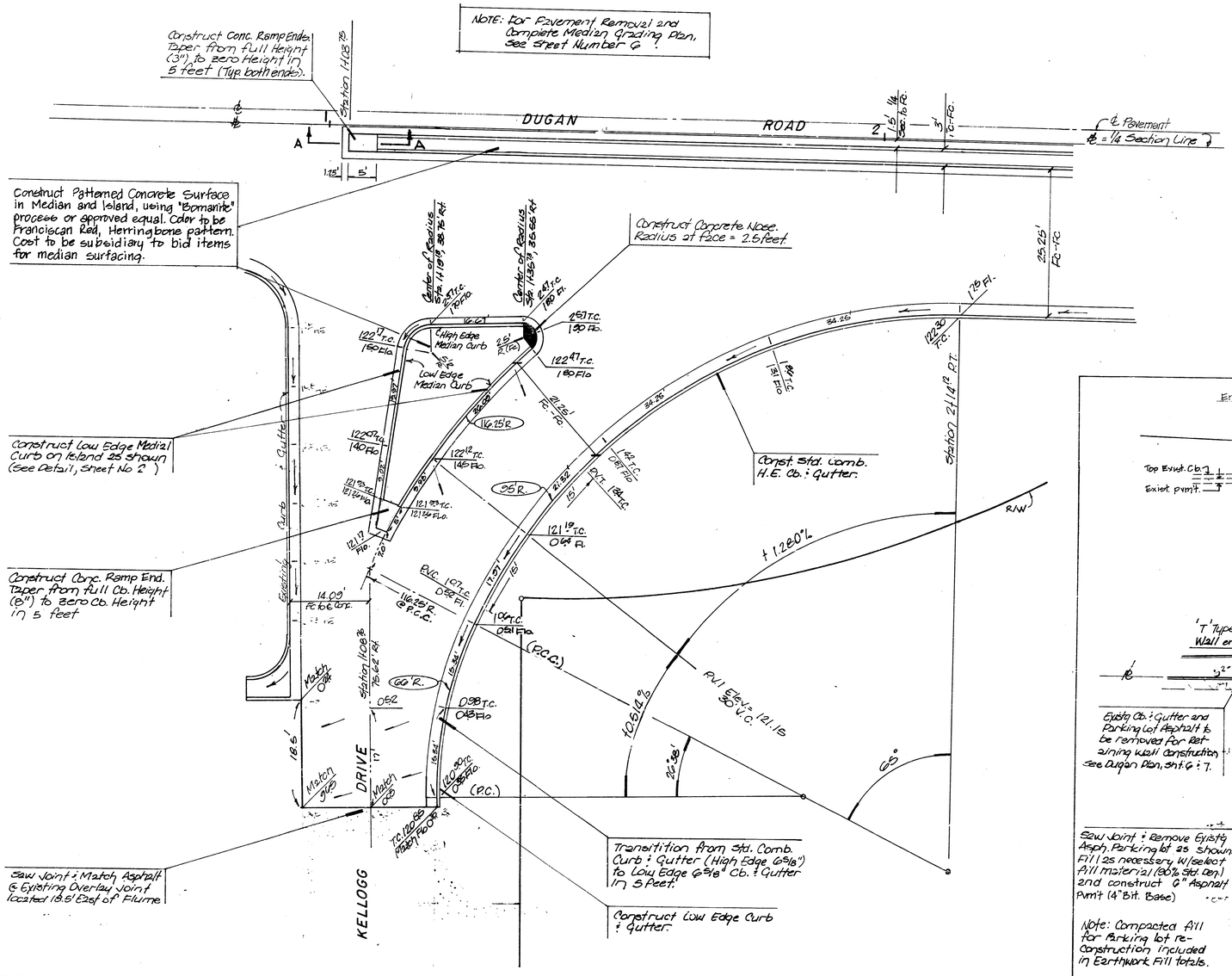
STANDARD WHEELCHAIR RAMP CONSTRUCTION DETAIL FOR NEW STREET CONSTRUCTION ON RADIUS WITH 6'± FROM BACK OF CURB TO PROPERTY CORNER

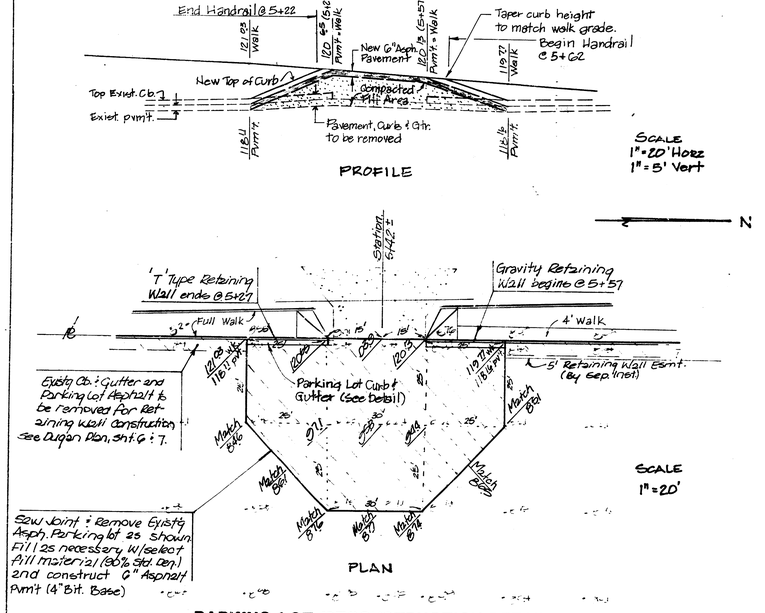




DIMENSIONS	
h	b
1'6"	10"
1'9"	11"
2'0"	13"
2'3"	15"

NOTE: For Pavement Removal and Complete Median Grading Plan, See Sheet Number 6.





Note: Compacted Fill for Parking lot re-Construction included in Earthwork Fill totals.

PARKING LOT RECONSTRUCTION DETAIL
STA. 5+42

Revised 12-5-86. Deleted Asphalt Median Surf. note. Revised Island Detail 2-16-87.

PAVEMENT DETAILS 5/18

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5/18

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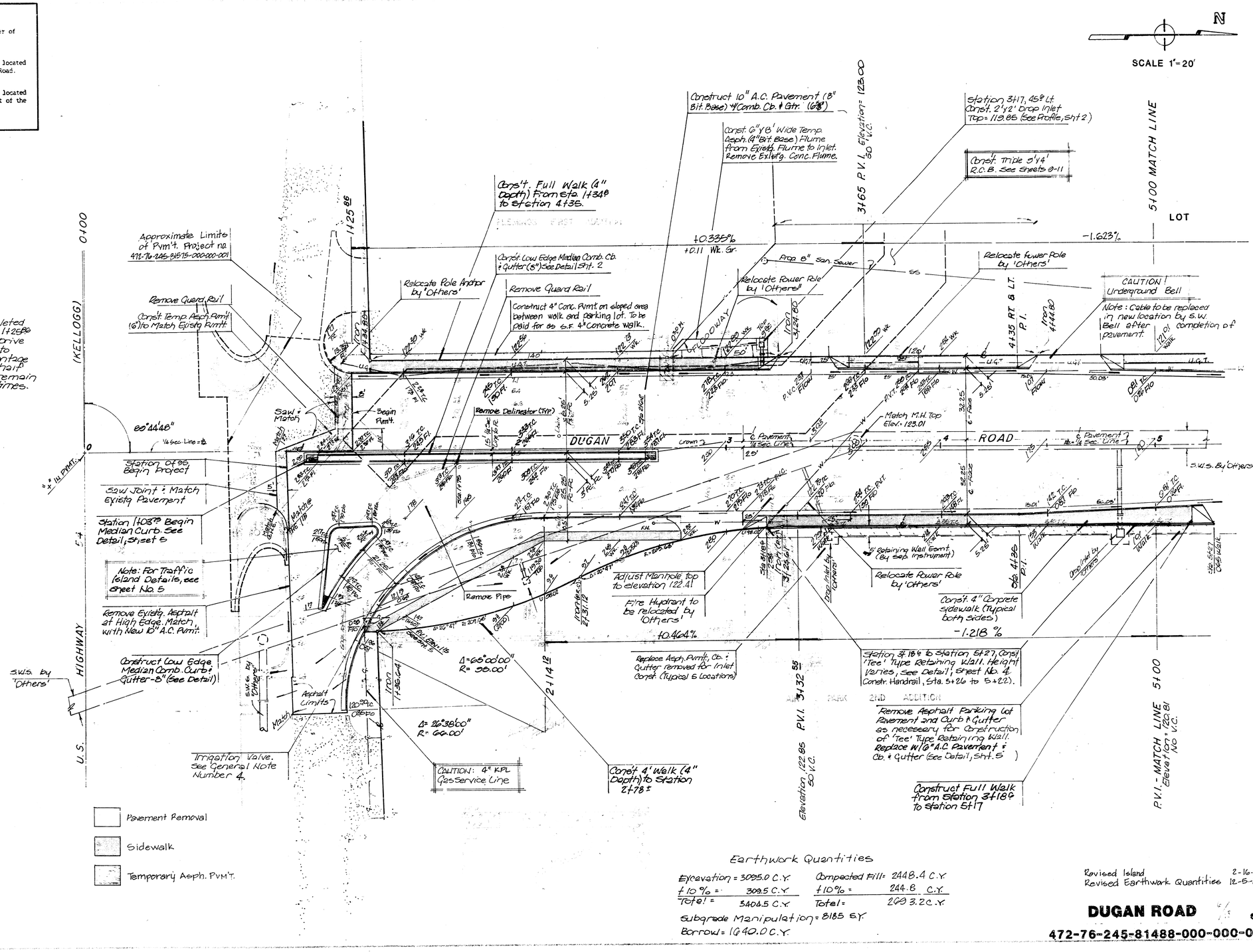
PROJECT BENCH MARKS

Square cut in top of curb at the Southwest corner of Hammerhead Cul-De-Sac on Maple Lane.
Elev.= 118.94 City Datum

"X" in top of Southwest bolt in light pole base located 151 feet right of pavement station 6+90, Dugan Road.
Elev.= 120.28 City Datum

"X" in top of Northwest bolt in light pole base located 86 feet north of the south curb and 60 feet east of the west curb in Sam's Wholesale Club parking lot.
Elev.= 120.55 City Datum

NOTE: Pavement shall be completed from approximately Sta. 1+28 to Sta. 3+18, including 30' drive Approach (Rt. Side), prior to closing East half of frontage road intersection. West half of intersection shall remain open to traffic at all times.



Earthwork Quantities

Excavation = 3095.0 C.Y.		Compacted Fill = 2448.4 C.Y.	
± 10% =	309.5 C.Y.	± 10% =	244.8 C.Y.
Total =	3404.5 C.Y.	Total =	2693.2 C.Y.

Subgrade Manipulation = 8185 S.Y.
Borrow = 1640.0 C.Y.

Revised Island 2-16-87
Revised Earthwork Quantities 12-5-86

DUGAN ROAD 6/18

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N

SCALE 1"=20'

MATCH LINE 5100

THE DUGAN CENTRE ADDITION

6+70 P.V.I. Elevation 118.05 30' V.C.

9100 P.V.I. Elevation = 118.80 No V.C.

MATCH LINE 10+00

LOT

-1.623% Wk. Gr. Varies

+0.326% +0.55 Walk Gr.

-0.321% +0.55 Wk. Gr.

Prop. 8" Sanitary Sewer

Remove Pipe

Curb Inlet by 'Others'

Construct 10" A.C. Pavement (8" Bit. Base w/ Comb. Cb. & Gtr. (6%)

Relocate Power Pole By 'Others'

CAUTION! Underground Bell

Prop. 8" San. ℄

Prop. 12" Water ℄

DUGAN ROAD

℄ Pavement ℄

End full Walk at Drive

Adjust Manhole to Elevation 118.68

Construct 4" Sidewalk (Width = 4', (Typical Both Sides)

Curb Inlet by 'Others'

Adjust Manhole to Elevation 117.92

Saw ℄ Remove Concrete Parking Lot pavement as shown. Replace w/ 6" Concrete pavement, Curb & Gutter (detail, sheet 5).

Drop Inlet by 'Others' Top = 117.70

S.W.S by 'Others'

-1.624% Wk. Gr. Varies

+0.326% Wk. Gr. Varies

-0.321% +0.30 Wk. Gr.

AIR PARK 2ND ADDITION

Remove and replace Existing Asphalt Parking. See Detail, Sheet 5.

Station 5+67 to 6+50 Construct Gravity Retaining Wall: See Detail, Sht. 4. Construct Handrail, Sta. 5+62 to 6+23.

Remove Asphalt Parking Lot Pavement and Curb & Gutter as necessary for Construction of retaining wall. Replace w/ 6" Asphalt Pavement (4" Bit. Base).

Replace Asphalt Pavement, Cb. & Gutter removed for Inlet Const. (Typical 5 Locations) 6" Asph. w/ 4" Bit. Base.

Construct Gravity Type Retaining Wall from Sta. 8+30 to 8+88, See Detail, Sheet 4.

MATCH LINE - P.V.I. 5100 Elevation = 120.61 No V.C.

Elevation = 118.05 P.V.I. 6+70 30' V.C.

Elevation = 118.80 9100 P.V.I. No V.C.

MATCH LINE 10+00

— Indicates Removal

PROJECT BENCH MARKS

Square cut in top of curb at the Southwest corner of Hammerhead Cul-De-Sac on Maple Lane.
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Elev.= 120.55 City Datum.

DUGAN ROAD 7/18

472-76-245-81488-000-000-001

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PROJECT BENCH MARKS

Square cut in top of curb at the Southwest corner of Hammerhead Cul-De-Sac on Maple Lane.
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Elev.= 120.55 City Datum

N

SCALE 1"= 20'

THE DUGAN CENTRE ADDITION

MATCH LINE 10+00

P.V.I. Elevation = 118.37 No V.C. 10+33.91

LOT

LOT 9

-0.32% +0.32% +0.55 Wk. Gr.

Prop. 8" San. Sewer ?

Inlet by Others

Curb Inlets by 'Others'

Power Pole to be Relocated by Others

Construct 10" A.C. Pvmt. w/ Comb. Cb. & Gutter (656')

CAUTION: Bell U.G. See Notes

Construct Wheelchair Ramp. See detail, Sheet No. 5.

12+56.85

12+74.80

S.W.S by Others

Future Pavement

13+19.68

Sta. 15+55.18 @ Bk. Cb.

Sta. 15+49.68

TAFT

DUGAN ROAD

Match MH Top Elev. 118.68

Match MH Top Elev. 118.93

Pavement 14 See Det. 2

90°10'14"

89°49'46"

89°56'

Regrade Transition Approach to Match new pavement Construction. Cost of regrading to be incidental to project.

End Construction

Cb. Inlets by 'Others'

Remove Pipe

Power Pole to be relocated "By Others"

Adjust Manhole Top to Elev. 118.90

Remove Barricade and replace with Type III Barricade as shown.

Construct Std. 2'x2' Drop Inlet. Top = 118.8 See Profile, Sheet 2

Sta. 13+19.68 - Iron N.E. Cor. S1/2 NW1/4 Sec. 27-27-1W.

Curb Inlet by 'Others'

Adjust Manhole Ring & Cover to the West See Adjustment Detail, Sheet No 12.

Construct 4" Concrete Sidewalk, Width = 4 feet (Typical Both Sides)

Const. Wheelchair Ramp See Detail Sheet 4

Construct 3' Wide Concrete Flume Useful 118.00 Depl. 117.80

End Construction

Install 36 L.F. 12" R.C.P. Useful 118.00 Depl. 117.90

Regrade Transition Approach to Match new pavement Construction. Cost of regrading to be incidental to project. Also regrade 50 L.F. ditch to drain east on S. side Taft.

AIR PARK 2ND ADDITION

MATCH LINE - 10+00

Elevation = 118.37 P.V.I. 10+33.91 No V.C.

Revised grade @ 13+55.18, 40' Lt. 12-5-86

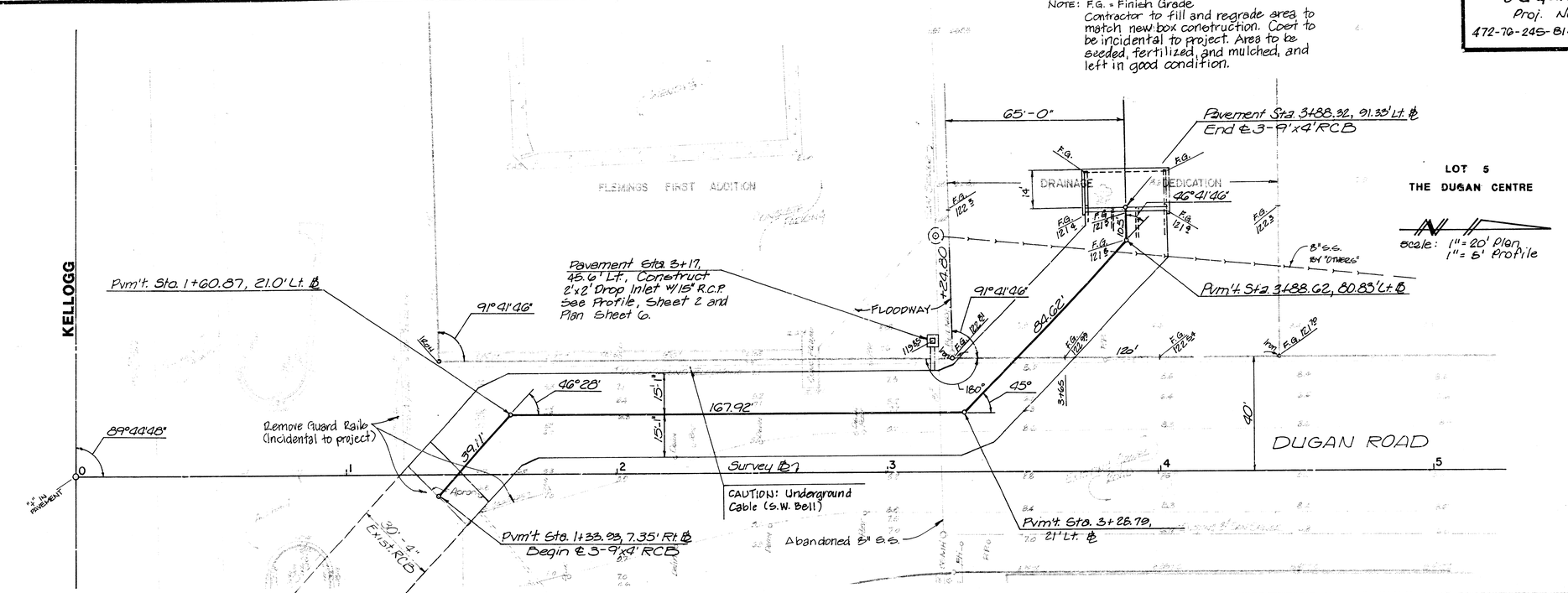
DUGAN ROAD 8/18

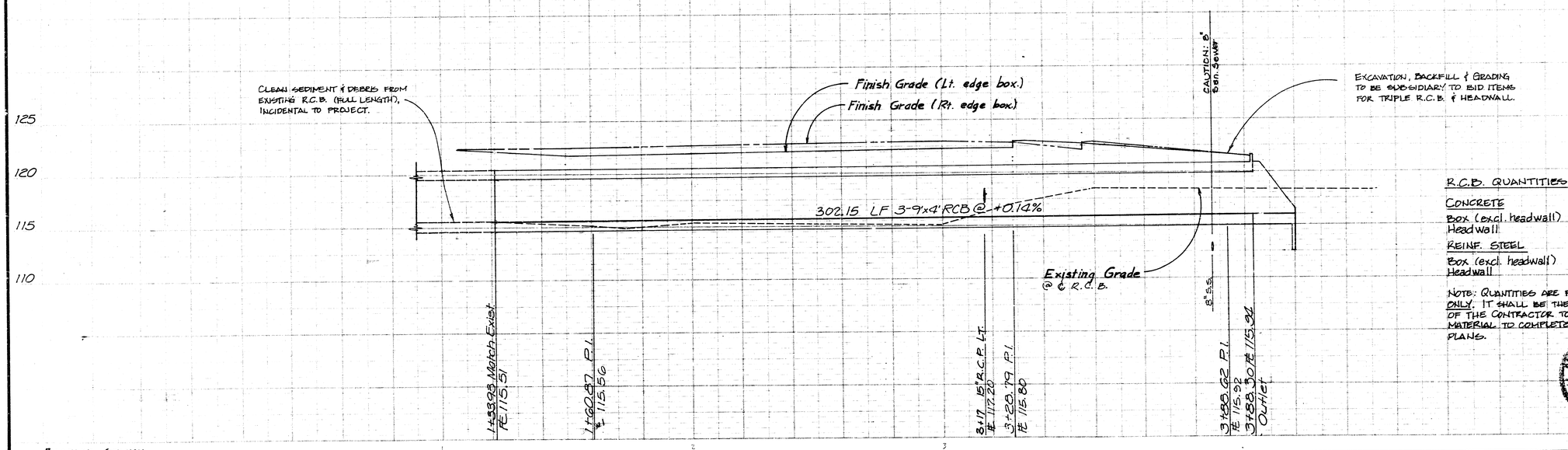
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DUGAN ROAD
Proj. Number
472-76-245-81488-000-000-001

NOTE: F.G. = Finish Grade
Contractor to fill and regrade area to match new box construction. Cost to be incidental to project. Area to be seeded, fertilized, and mulched, and left in good condition.





R.C.B. QUANTITIES

CONCRETE		
Box (excl. headwall)	800.4 C.Y.	115
Headwall	22.2 C.Y.	
REINF. STEEL		
Box (excl. headwall)	73.03 Tons	110
Headwall	0.83 Tons	

NOTE: QUANTITIES ARE FOR INFORMATION ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FURNISH ALL MATERIAL TO COMPLETE THE WORK PER PLANS.

BRUCE WILLIAM BASSER
LICENSED
9316
KANSAS
PROFESSIONAL ENGINEER

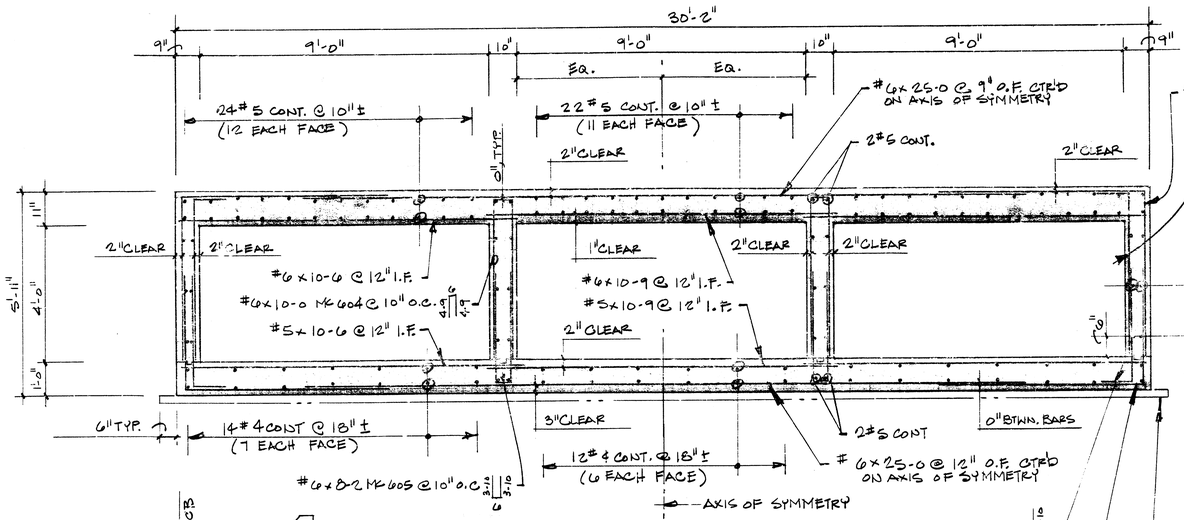
9/18

9/18

22x36

vhs 81

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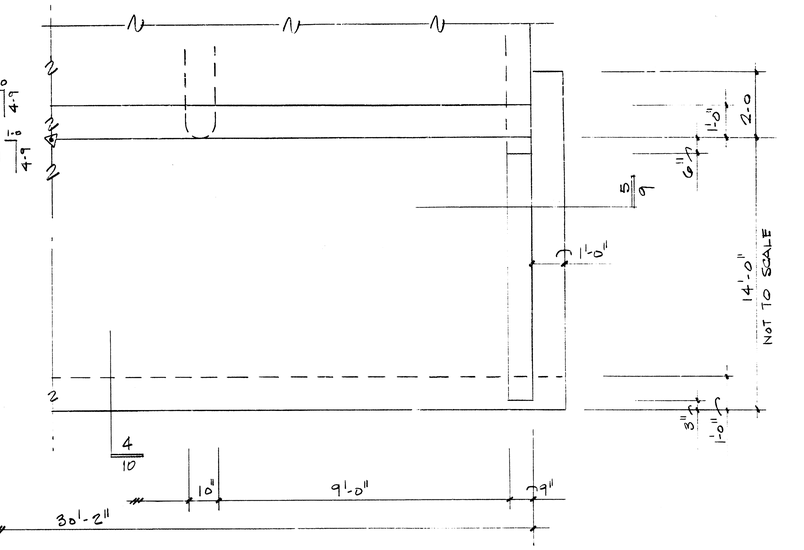


1 SECT. THRU 3-9'x4' RCB EXTENSION

½" = 1'-0"

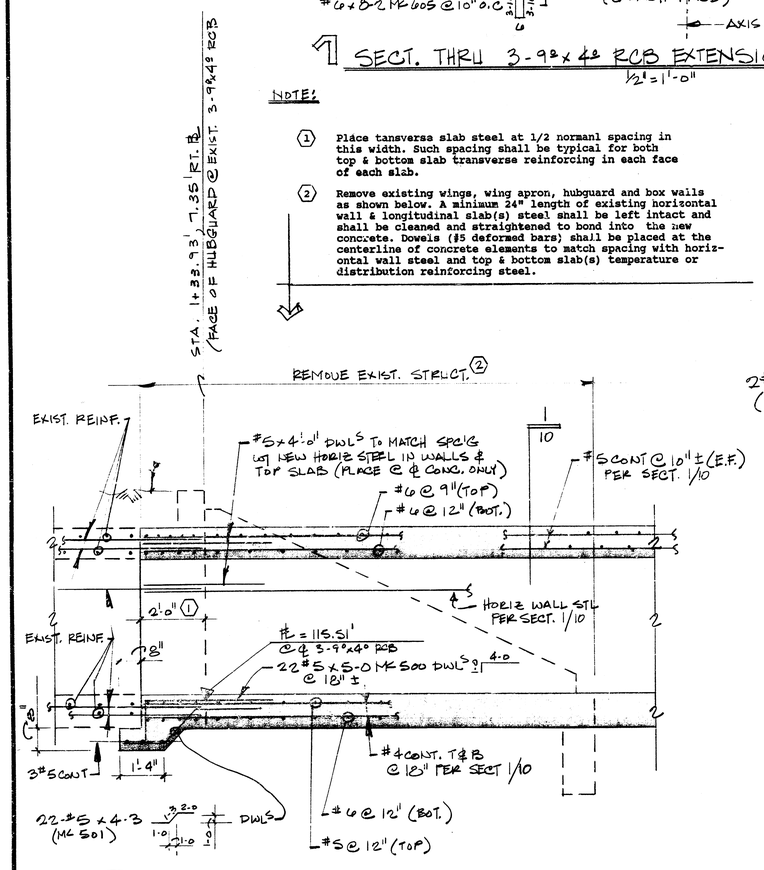
NOTE:

1. Place tansverse slab steel at 1/2 normanl spacing in this width. Such spacing shall be typical for both top & bottom slab transverse reinforcing in each face of each slab.
2. Remove existing wings, wing apron, hubguard and box wails as shown below. A minimum 24" length of existing horizontal wall & longitudinal slab(s) steel shall be left intact and shall be cleaned and straightened to bond into the new concrete. Dowels (#5 deformed bars) shall be placed at the centerline of concrete elements to match spacing with horizontal wall steel and top & bottom slab(s) temperature or distribution reinforcing steel.



2 PART PLAN @ HEADWALL STRUCTURE

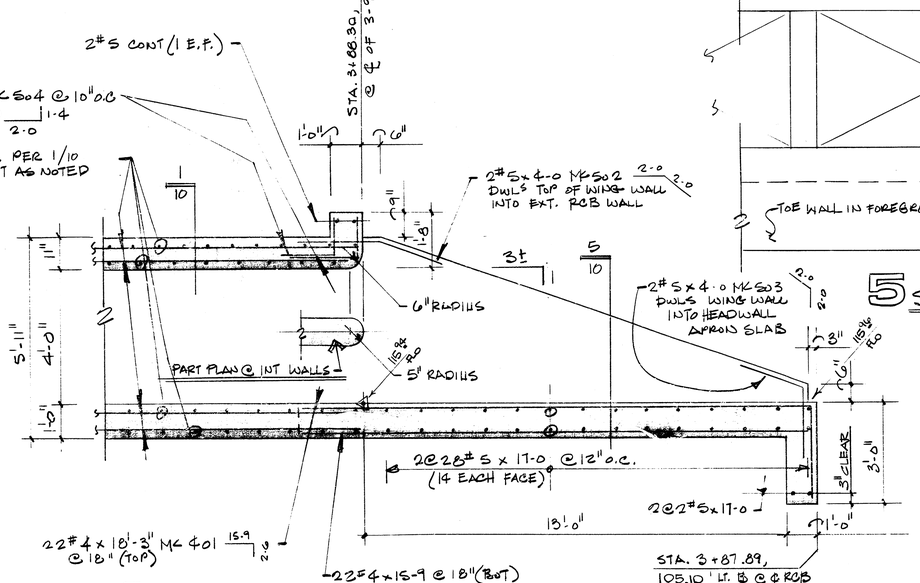
½" = 1'-0"



3 CONN. DETAIL OF RCB EXTENSION TO EXIST 3-9'x4' RCB

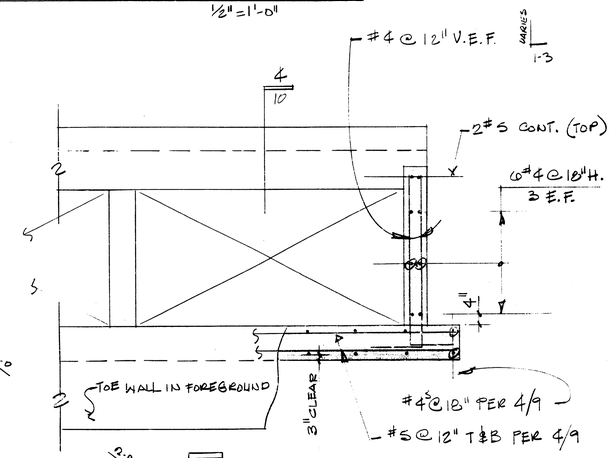
½" = 1'-0"

END PAY LENGTH R.C.B.C. — BEGIN HEADWALL



4 SECT. @ HEAD WALL OF 3-9'x4' RCB EXTENSION

½" = 1'-0"



5 SECTION THRU RCB WING

½" = 1'-0"

TRIPLE 9' x 4' REINFORCED CONCRETE BOX DETAILS

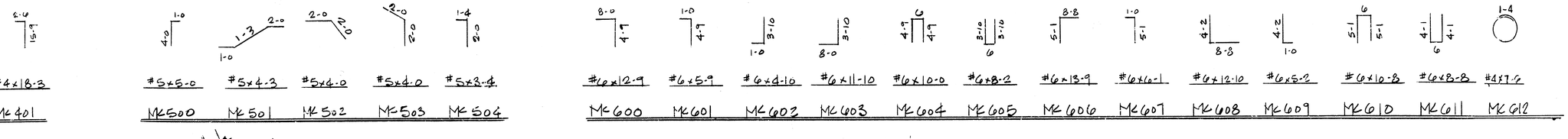
PROJECT NO. 472-76-245-81488-000-000-001

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Checked by	
Date	
Job no.	

Sheet 10 of 18

10/18

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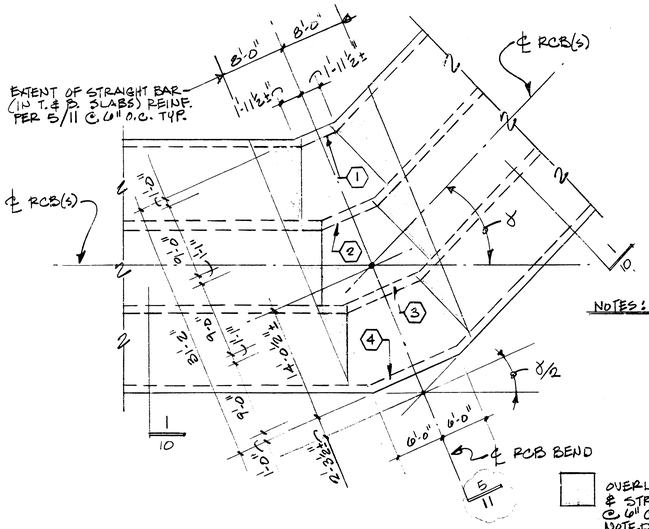


A BAR BENDING DIAGRAMS

NO SCALE

1	6# 4 x 8-0	Mk402	3 H.E.F.
2	6# 4 x 10-8	Mk403	3 H.E.F.
3	6# 4 x 13-4	Mk404	3 H.E.F.
4	6# 4 x 16-0	Mk405	3 H.E.F.
4c 5	6# 4 x 4-0	Mk400	3 H.E.F.

CORNER BAR NOTES/DIAGRAMS

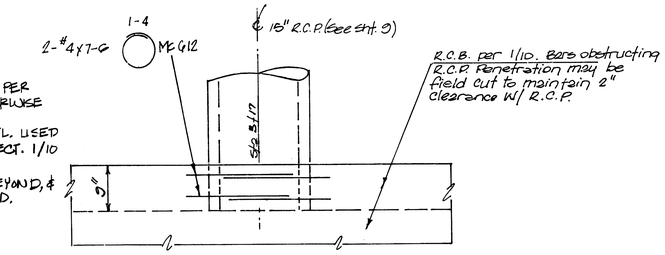


NOTES:

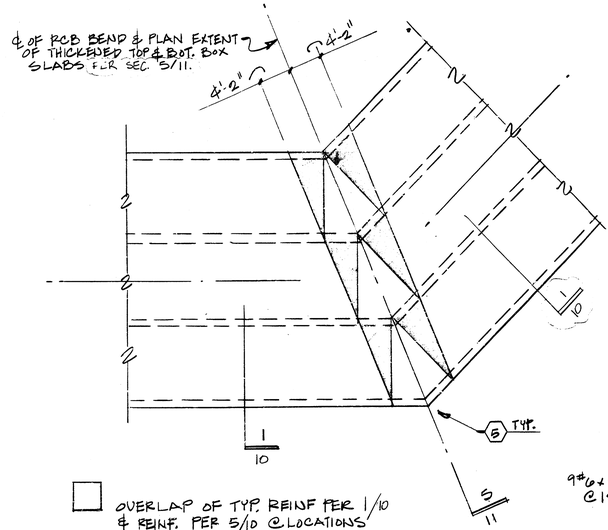
1. ALL CONCRETE THICKNESSES ARE PER SECTION 1/10 EXCEPT AS NOTED OTHERWISE ID THIS PLAN.
2. ALL BENT BARS & WALL TEMP. STL. USED @ THESE BEND LOC'S ARE PER SECT. 1/10 EXCEPT AS NOTED OTHERWISE.
3. SLAB TEMP. STL. EXTENDS 2'-0" BEYOND, & EA. SIDE OF, THE ℄ OF RCB BEND.

7 PLAN VIEW @ ALIGNMENT BENDS IN 3-9' x 4' RCB

⅛" SCALE @ Sta. 1+60.87, 21.0 LT. & Sta. 3+28.79, 21.0 LT.

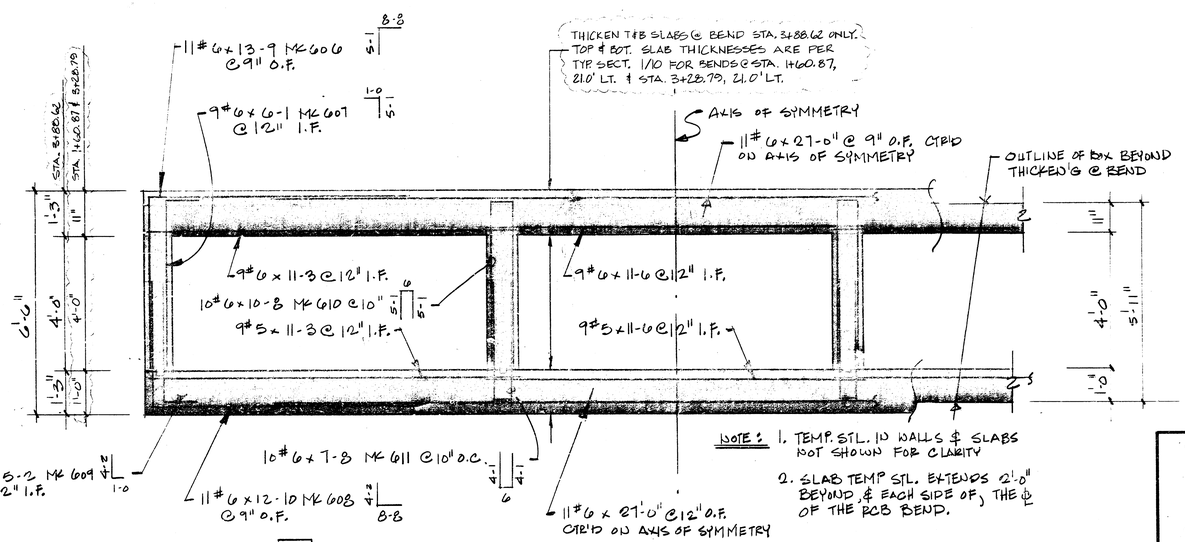


6 PLAN OF 15" PIPE JUNCTION



4 PLAN VIEW @ ALIGNMENT BEND @ STA. 3+88.62, 80.83' LT.

⅛" = 1'-0"



NOTE: 1. TEMP. STL. IN WALLS & SLABS NOT SHOWN FOR CLARITY

2. SLAB TEMP STL. EXTENDS 2'-0" BEYOND, & EACH SIDE OF, THE ℄ OF THE RCB BEND.

5 SECTION SHOWING ADDN'L REINF @ ALIGNMENT BEND

(WALLS SEEN @ SKEW) ½" = 1'-0"

GENERAL NOTES

CONCRETE:

C 1. All concrete to have a minimum compressive strength of 5000 p.s.i. at 28 days, unless noted otherwise.

C 2. All reinforcing to meet ASTM A615, grade 60.

C 3. All reinforcing steel shall be placed in accordance with ACI Detailing Manual SP-66, 1980 edition and ACI 315 Manual of Standard Practice for detailing reinforced concrete structures.

C 4. All concrete to have from 4 to 6% entrained air.

C 5. Bev. 1 all exposed concrete edges with 3/4" triangular moulding.

LOADS:

01 AASHTO HS-20-44

JAMES WILLIAM BAILEY LICENSED 9316 KANSAS PROFESSIONAL ENGINEER

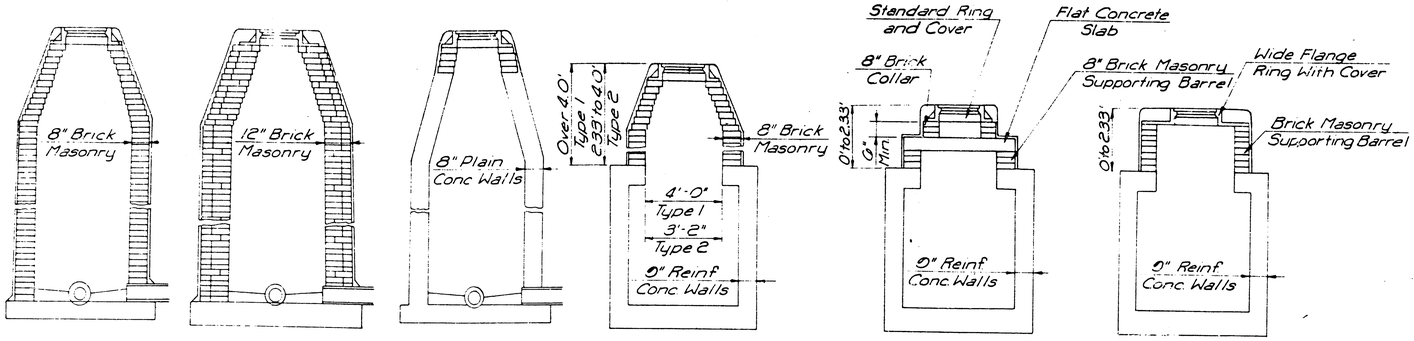
TRIPLE 9' x 4' REINFORCED CONCRETE BOX DETAILS

PROJECT NO.
472-76-245-81488-000-000-001

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Checked by	
Date	11/18
Job no.	
Sheet	11
of	18

Revised Details #4,5 & 7 as noted thus 12-5-86

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TYPE A
Single Wall Brick Masonry

TYPE B
Double Wall Brick Masonry

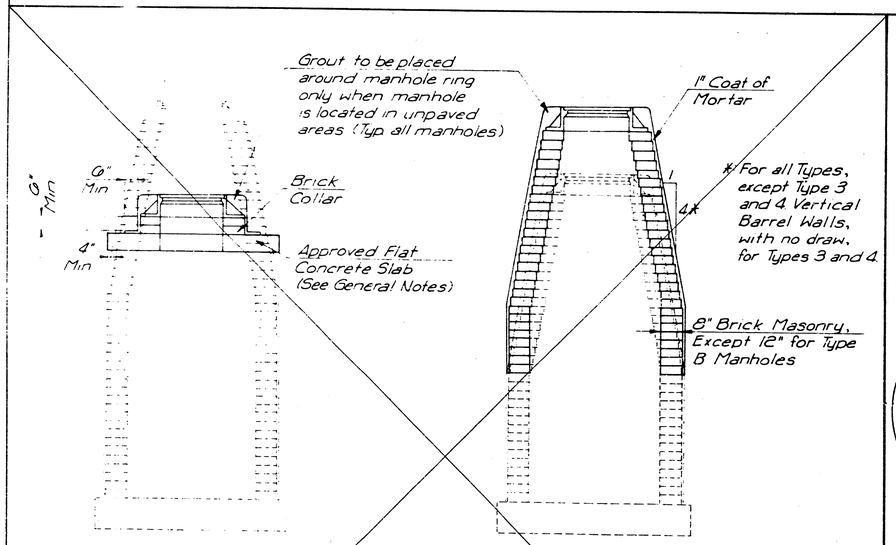
TYPE C & D
Cast in Place
(Type D is plastic lined & has brick draw)

TYPE 1 & 2
Reinforced Concrete

TYPE 3
Reinforced Concrete

TYPE 4
Reinforced Concrete
(Wide Flange Ring)

DEFINITION SKETCHES - CITY OF WICHITA STANDARD MANHOLES



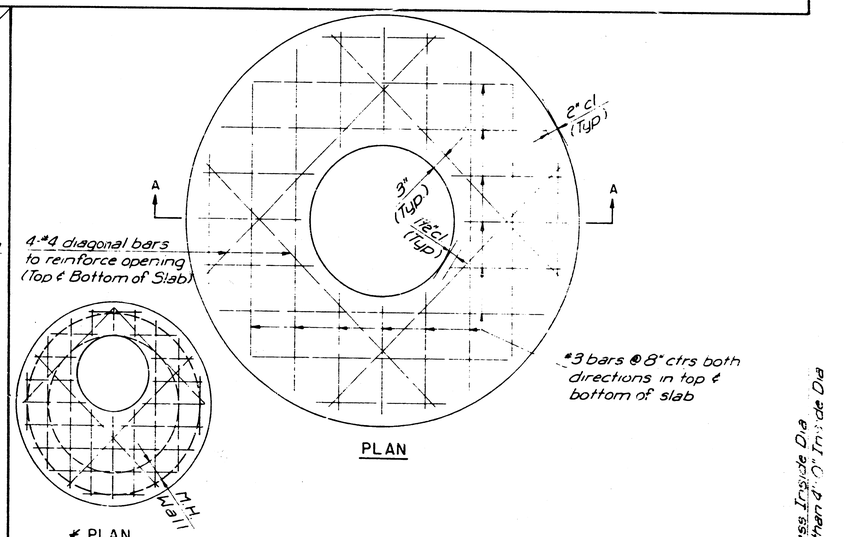
DOWNWARD ADJUSTMENT
(GREATER THAN 12")
All Types

THE APPROPRIATE PORTIONS OF THE DRAW AND BARREL OF TYPE A, B, C, D, 1 AND 2 MANHOLES SHALL BE REMOVED. A FLAT CONCRETE SLAB SHALL BE PLACED AND THE RING AND COVER RESET. ALL WORK AND MATERIALS SHALL CONFORM TO THE DETAILS SHOWN AND THE GENERAL NOTES.

COURSES OF BRICK BARREL SUPPORTING THE WIDE FLANGE RING FOR TYPE 4 MANHOLES AND FLAT CONCRETE SLAB FOR TYPE 3 MANHOLES SHALL BE REMOVED AS NECESSARY PRIOR TO RESETTING THE WIDE FLANGE RING OR FLAT CONCRETE SLAB AND RING. ALL WORK AND MATERIALS SHALL CONFORM TO THE DETAILS SHOWN AND THE GENERAL NOTES.

UPWARD ADJUSTMENT
(GREATER THAN 12")
All Types

THE ENTIRE DRAW OF TYPES A, B, C, D, 1 AND 2 MANHOLES SHALL BE REMOVED, THE MANHOLE BARREL RAISED THE APPROPRIATE AMOUNT, A NEW DRAW CONSTRUCTED, AND THE RING AND COVER RESET. THE UPPER PORTION OF TYPE 3 MANHOLES SHALL BE REMOVED TO THE BOTTOM OF THE FLAT CONCRETE SLAB, THE BRICK MASONRY BARREL SUPPORTING THE SLAB SHALL BE RAISED THE APPROPRIATE AMOUNT, AND THE SLAB AND RING AND COVER RESET. THE WIDE FLANGE RING AND COVER OF TYPE 4 MANHOLES SHALL BE REMOVED, THE BRICK MASONRY BARREL SUPPORTING THE RING SHALL BE RAISED THE APPROPRIATE AMOUNT AND THE RING AND COVER RESET. ALL WORK REQUIRED FOR A GREATER THAN TWELVE INCH (12") UPWARD ADJUSTMENT OF ANY MANHOLE SHALL BE ACCOMPLISHED WITH BRICK MASONRY IN ACCORDANCE WITH THE DETAILS SHOWN AND THE GENERAL NOTES.



* To be used only if necessary to keep ring and cover from conflicting with curb or combined curb and gutter Flat concrete slab shall be rotated on existing manhole to position ring and cover in pavement or behind curb.

FLAT CONCRETE SLAB DETAILS

NOTE: USE ALTERNATE OPENING LOCATION WITH RING AND COVER TOWARD WEST SIDE OF MANHOLE, IN ORDER TO PROVIDE CLEARANCE FROM PROPOSED CURB. CONSTRUCT BRICK COLLAR ON TOP OF FLAT CONC. SLAB, MINIMUM 6" THICK.

MANHOLE ADJUSTMENT DETAILS

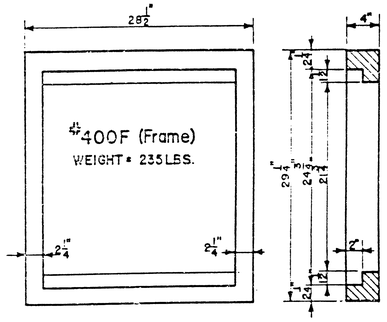
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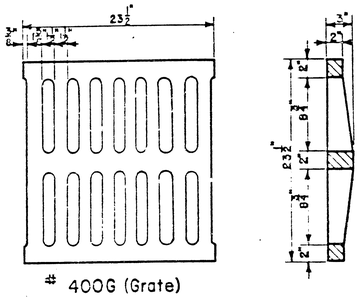
M. E. LINDEBAK – CITY ENGINEER 12/18

Designed by		Checked by	12/18
Drawn by		Date	Job No

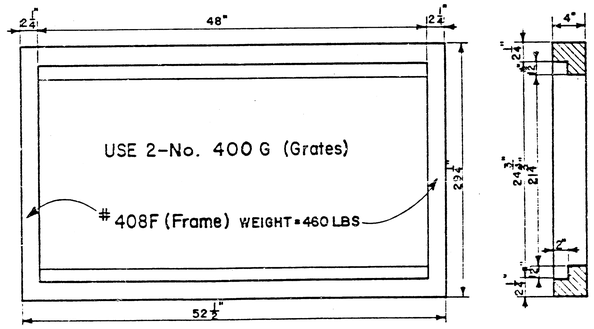
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NOTE: Grates shall be imprinted on the top surface with "CITY OF WICHITA" using letters at least 1" in height. Other marking methods may be used only if approved by the engineer.

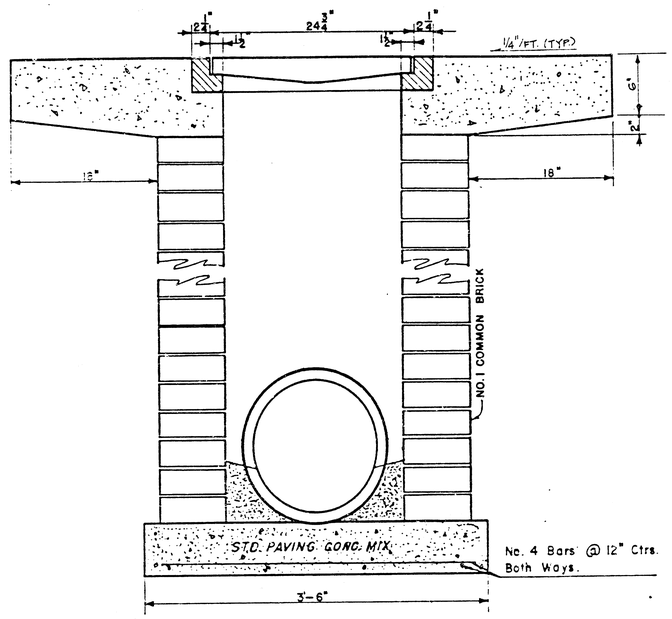


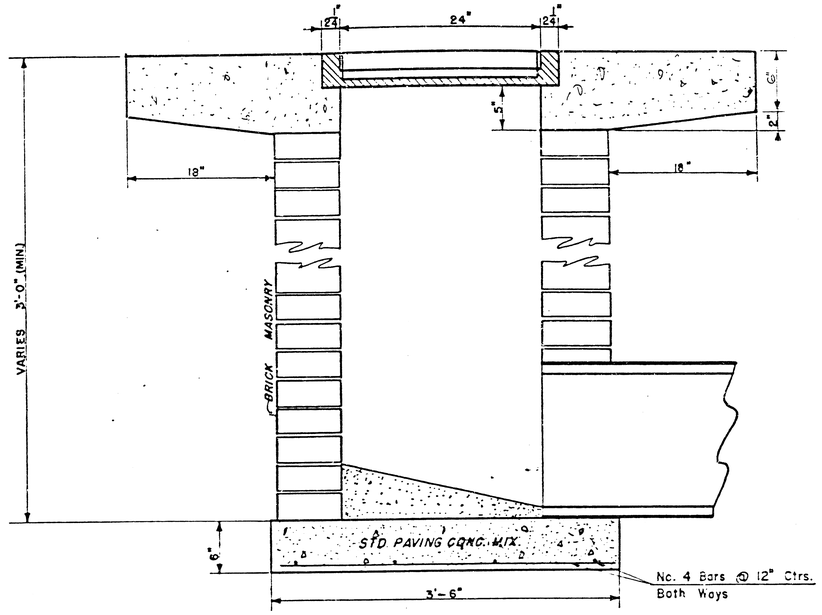


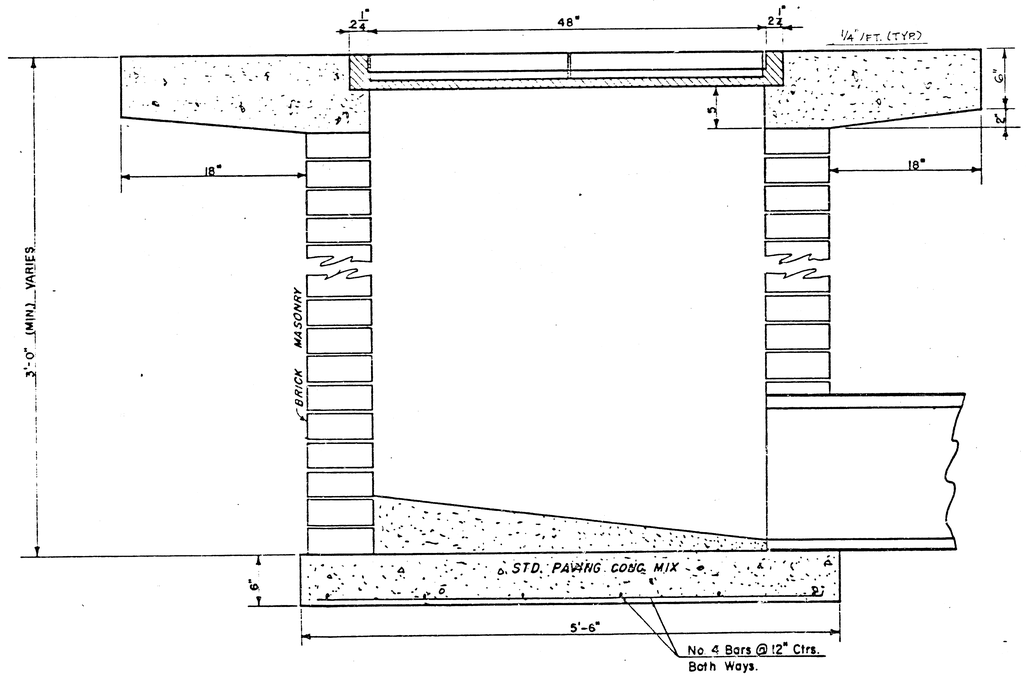
24"x24" Frame & Grate Detail



Double 24"x24" Frame Detail





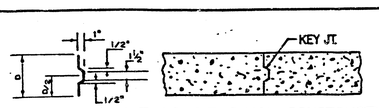


DROP INLET DETAILS

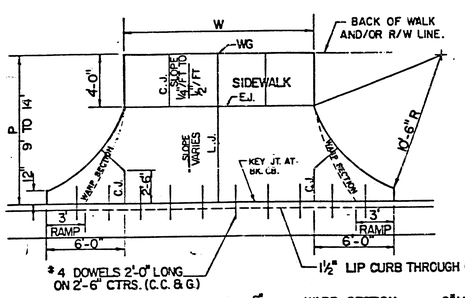
M.E. Lindebak, City Engineer
City of Wichita, Kansas
Project **DUGAN - KELLOGG to TAFT**
Project No. 472-76-245-81483-000-000-001
Date: 13/13
Scale: 1-1/2" = 1'-0"

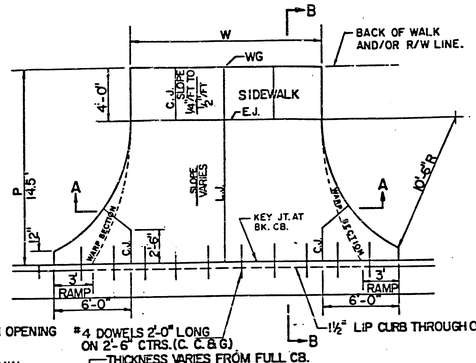
13/18

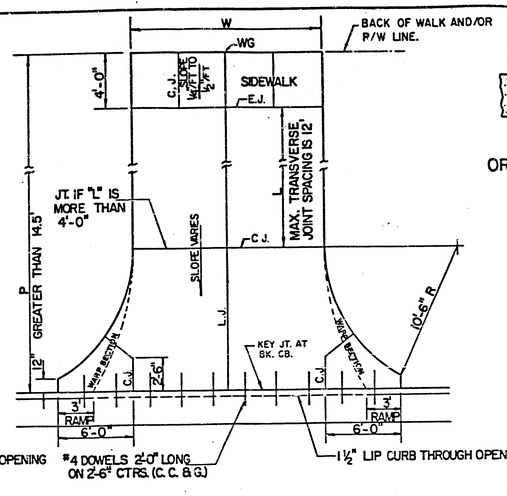
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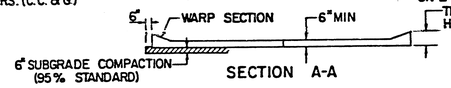


ALT. LONGITUDINAL CONSTRUCTION JOINT

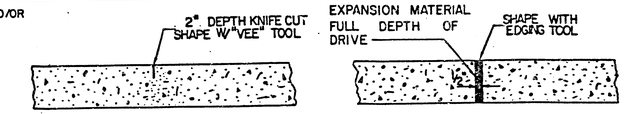








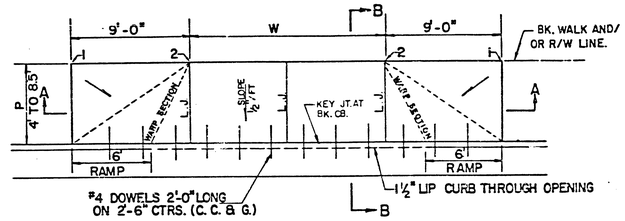
SECTION A-A

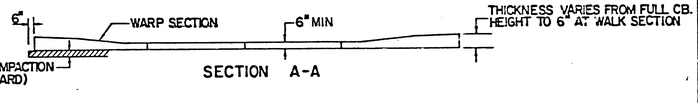


CONTRACTION JOINT (C.J.) OR LONGITUDINAL JOINT (L.J.)

NO SAWN JOINTS WILL BE ALLOWED.

EXPANSION JOINT (E.J.)

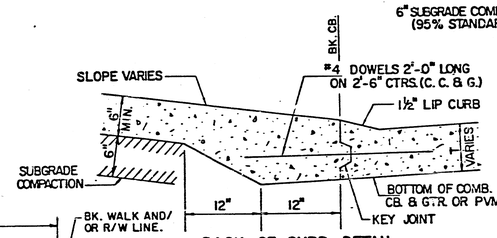




SECTION A-A

PARKING WIDTH "P"	9'	10'	11'	12'	13'	14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.35'	0.35'	0.40'	0.45'	0.60'	0.80'	1.35'	1.85'	2.35'	2.85'	3.35'	3.85'	4.35'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.35'	0.35'	0.40'	0.45'	0.60'	0.70'	1.04'	1.30'	1.56'	1.82'	2.08'	2.34'	2.60'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	0.19'	0.21'	0.23'	0.25'	0.27'	0.30'	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE MIN. DIST. OF PT. "WG" ABOVE OR BELOW TOP OF FULL CURB	-.19'	-.16'	-.13'	-.10'	-.06'	0.00	0.00'	0.15'	0.25'	0.35'	0.45'	0.55'	0.65'

RADIUS RAMP DRIVES (P= 9.0' & GREATER)



BACK OF CURB DETAIL

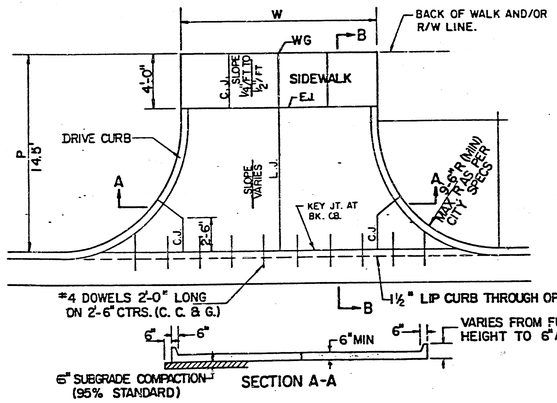
SECTION B - B (no scale)

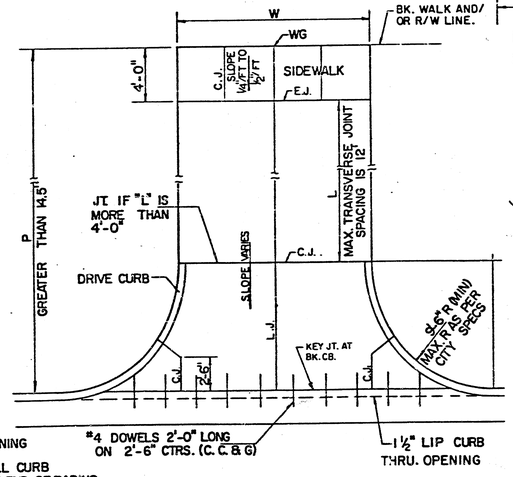
PARKING WIDTH "P"	4'	4.5'	5'	5.5'	6'	6.5'	7'	7.5'	8'	8.5'
DIST. OF PT. "1" ABOVE TOP OF FULL CB.	0.08'	0.09'	0.10'	0.12'	0.13'	0.14'	0.15'	0.16'	0.17'	0.18'
DIST. OF PT. "2" BELOW TOP OF FULL CB.	-.26'	-.24'	-.22'	-.20'	-.18'	-.16'	-.14'	-.12'	-.10'	-.08'

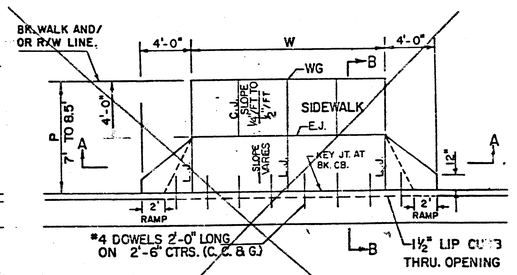
FULL RAMP DRIVE (P=4.0' TO 8.5')

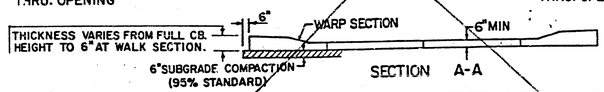
GENERAL NOTES

1. DRIVEWAY CONSTRUCTION DETAILED ON THIS SHEET IS FOR USE WITH FULL HEIGHT STREET CURBS AND IN AREAS WITHOUT FULL WALK CONSTRUCTION IN THE PARKING. SEE OTHER DETAIL SHEETS FOR DRIVEWAY CONSTRUCTION WITH ROLL CURB AND/OR FULL WALK.
2. ONE LONGITUDINAL JOINT SHALL BE CONSTRUCTED ALONG THE CENTERLINE OF DRIVES HAVING A "W" DIMENSION OF 24' OR LESS. TWO LONGITUDINAL JOINTS SHALL BE CONSTRUCTED WITH EQUAL SPACINGS NOT TO EXCEED 10' FOR DRIVES WITH A "W" DIMENSION GREATER THAN 24'.
3. DRIVEWAY WIDTH DENOTED AS "W" ON THE DETAIL DRAWINGS SHALL BE A MINIMUM OF 10' AND A MAXIMUM OF 30'. THE MAXIMUM OPENING FOR RADIUS TYPE DRIVES WITH CURBS THROUGH THE RADIUS SHALL NOT EXCEED 52' AT THE STREET CURB LINE.
4. CONSTRUCTION JOINT SPACING IN THE DRIVEWAY WALK SECTION SHALL BE A MINIMUM OF 3' AND A MAXIMUM OF 6' AND ARE TO BE EQUALLY SPACED WITHIN THIS RANGE. WALK SECTION SHALL BE CONSTRUCTED TO THE SAME THICKNESS AS THE DRIVEWAY.
5. DOWEL BARS SHALL BE OMITTED FROM THE KEYED CONSTRUCTION JOINT ALONG THE BACK OF THE STREET CURB LINE WHEN DRIVEWAYS ARE CONSTRUCTED IN CONJUNCTION WITH NEW CONCRETE PAVEMENT CONSTRUCTION.
6. ADDITIONAL THICKNESS OF DRIVE AS INDICATED IN THE DRAWINGS WILL NOT BE PAID FOR DIRECTLY AND THIS COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE DRIVEWAY CONSTRUCTION.
7. ONE HALF INCH EXPANSION JOINTS SHALL BE INSTALLED WHEREVER DRIVE CONSTRUCTION ABUTS SIDEWALK. ONE HALF INCH EXPANSION JOINTS SHALL ALSO BE INSTALLED ALONG THE PROPERTY LINE AND/OR BACK OF WALK LINE WHEN DRIVE CONSTRUCTION ALONG THIS LINE ABUTS CONCRETE PARKING LOTS OR CONCRETE DRIVE EXTENSION.
8. ALL DRIVEWAYS SHALL BE A MINIMUM OF 6" IN THICKNESS AND SHALL BE WITHOUT REINFORCEMENT. DRIVEWAYS MAY BE CONSTRUCTED THICKER THAN 6" AND THEY MAY BE REINFORCED WITH 6"x12" W4-W4 WELDED WIRE FABRIC WHEN PROPERLY AUTHORIZED BY THE PROPERTY OWNER WITH THE ENGINEER'S CONCURRENCE.
9. OPTIMUM DRIVEWAY ELEVATIONS SHOWN IN THE TABLES ARE TO BE USED WHEREVER POSSIBLE. ABSOLUTE MAXIMUM AND MINIMUM ELEVATIONS ARE TO BE USED ONLY WHEN THESE VALUES WILL PERMIT NEW CONSTRUCTION TO MATCH EXISTING DRIVES OR PARKING LOTS. VALUES SHOWN IN THE TABLES ARE BASED ON A FULL CURB HEIGHT ELEVATION OF 0.55' ABOVE THE GUTTER FLOW LINE AND MUST BE ADJUSTED ACCORDINGLY FOR OTHER CURB HEIGHTS. VALUES SHOWN IN THE TABLES WITH MINUS SIGNS INDICATE ELEVATIONS BELOW TOP OF FULL HEIGHT CURB.









SECTION A-A

PARKING WIDTH "P"	14.5'	20'	25'	30'	35'	40'	45'	50'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL. CB.	0.80'	1.35'	1.85'	2.35'	2.85'	3.35'	3.85'	4.35'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.70'	1.04'	1.30'	1.56'	1.82'	2.08'	2.34'	2.60'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.30	0.42'	0.52'	0.62'	0.72'	0.82'	0.92'	1.02'
ABSOLUTE MIN. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.00	0.00'	0.15'	0.25'	0.35'	0.45'	0.55'	0.65'

FULL RADIUS DRIVES (P=14.5' & GREATER)

PARKING WIDTH "P"	7'	7.5'	8'	8.5'
ABSOLUTE MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.00'	0.10'	0.20'	0.30'
OPTIMUM MAX. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.00'	0.10'	0.20'	0.30'
OPTIMUM MIN. DIST. OF PT. "WG" ABOVE TOP OF FULL CB.	0.15'	0.16'	0.17'	0.17'
ABSOLUTE MAX. DIST OF PT. "WG" BELOW TOP OF FULL CB.	-.25'	-.20'	-.20'	-.20'

FULL RAMP DRIVE (P=7.0' TO 8.5')

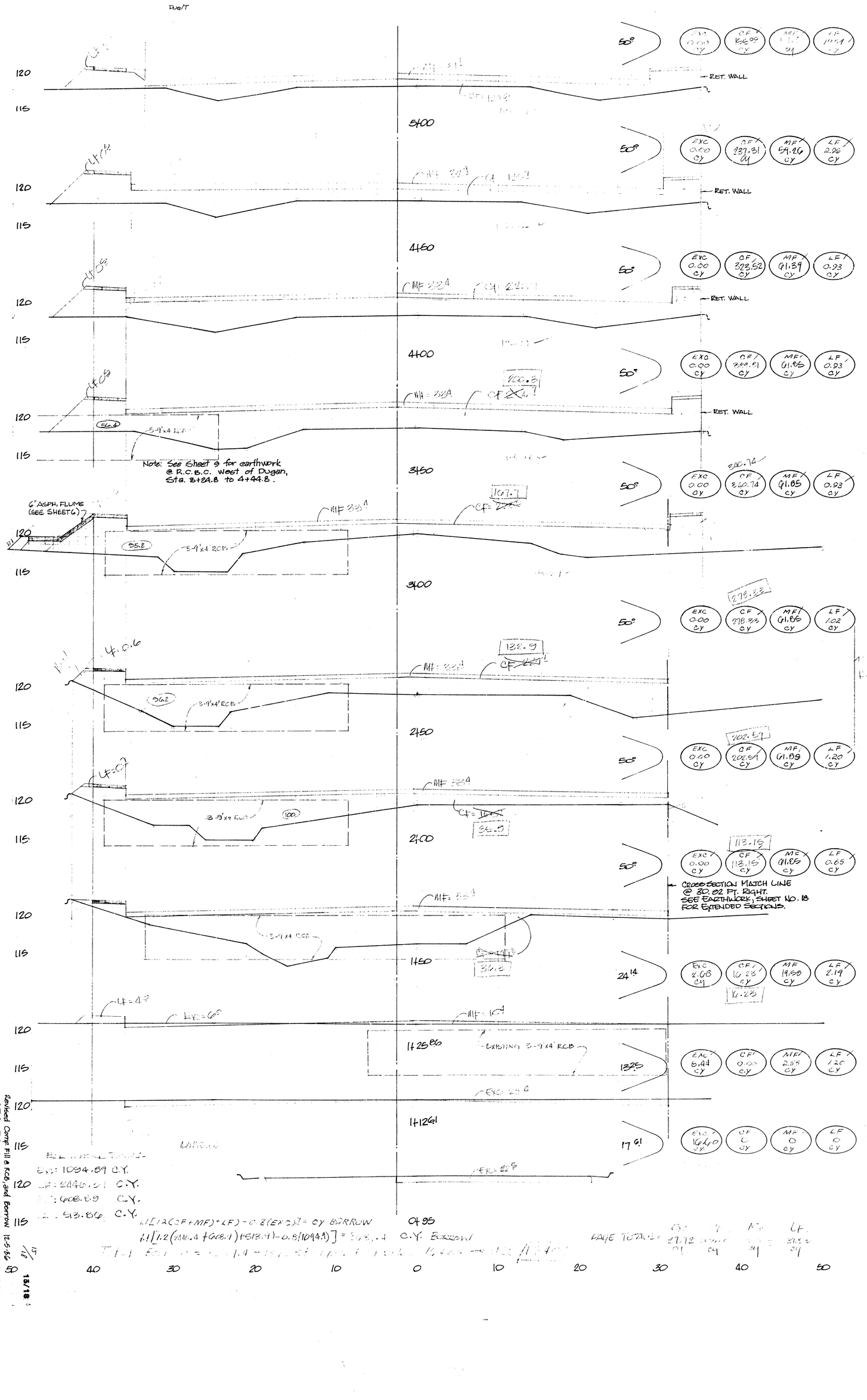
SCALE: 1"=5'

STANDARD DRIVE ENTRANCES
FULL HEIGHT CURB
CITY OF WICHITA, KANSAS 14/18

PROJECT NUMBER
472-76-245-81488-000-000-001

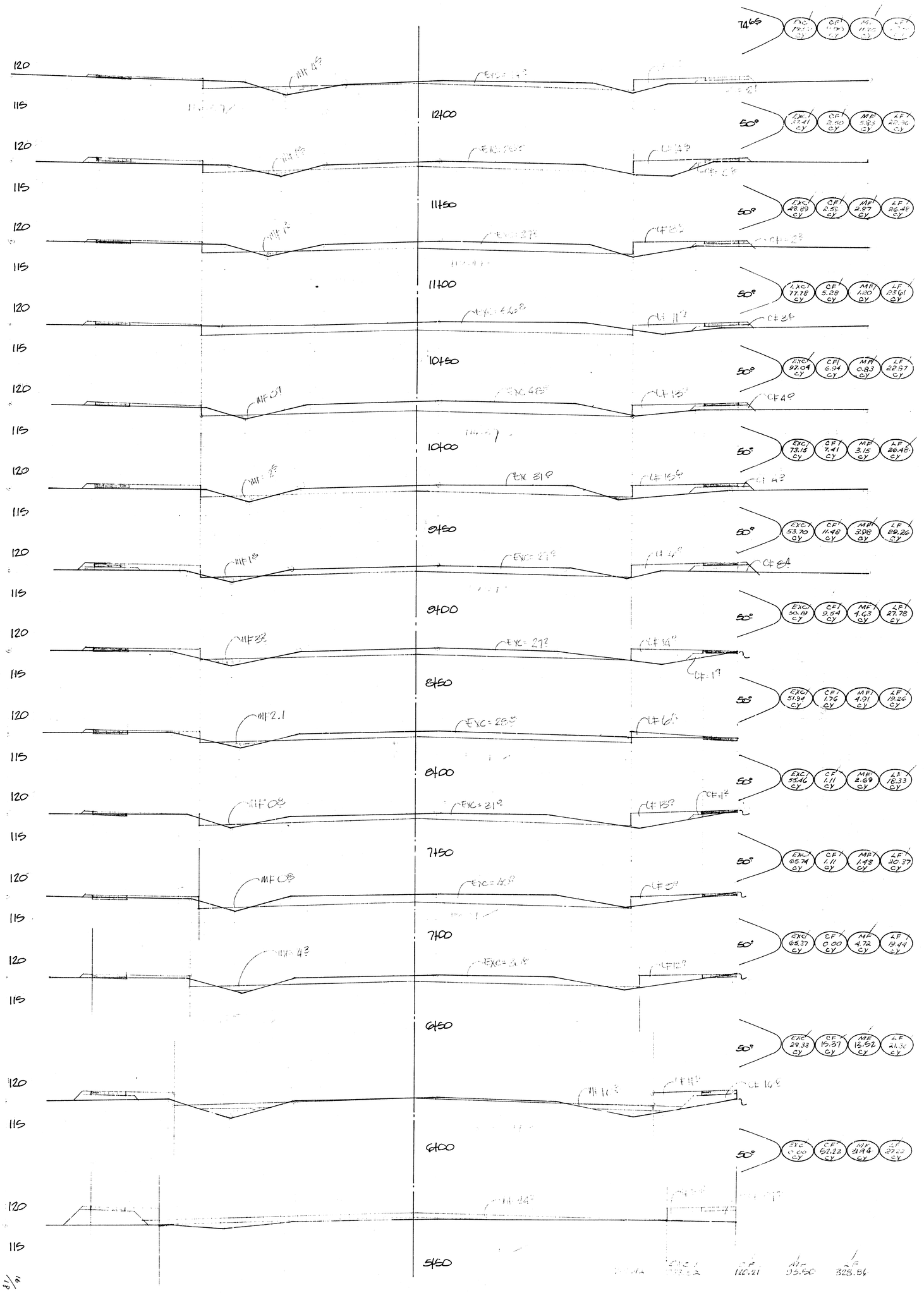
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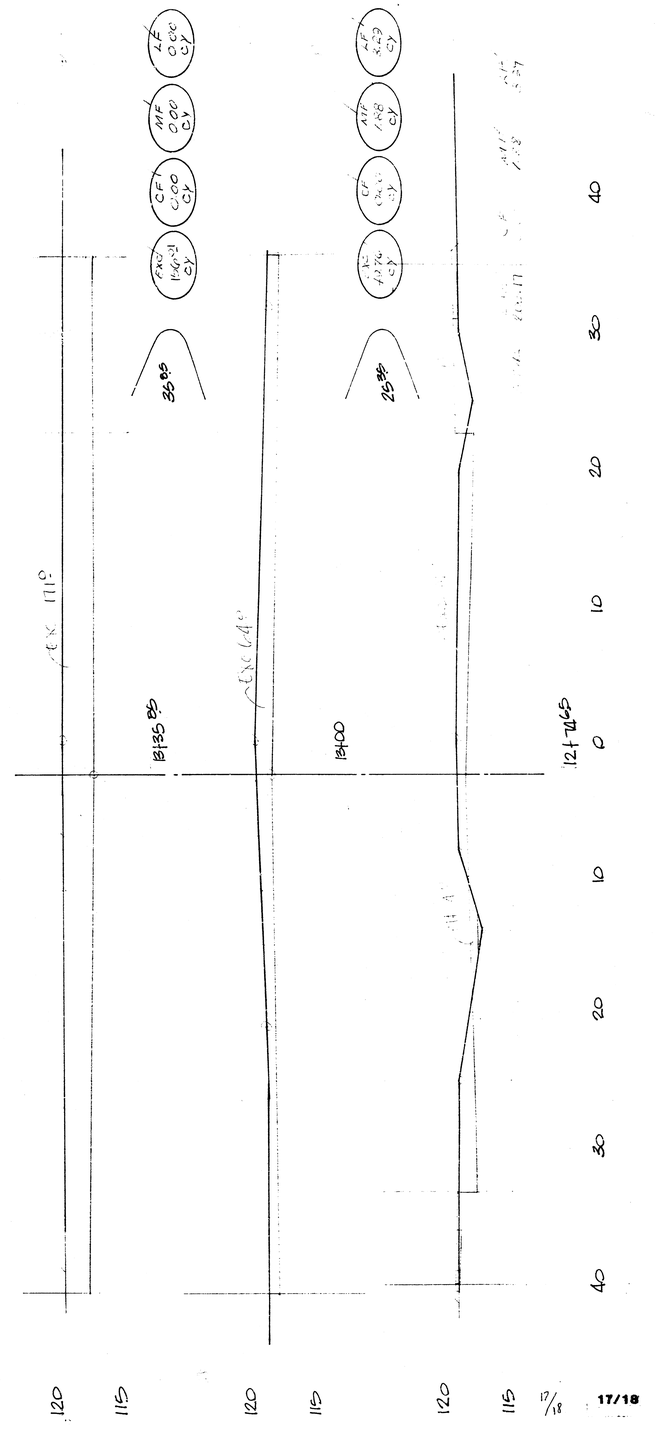
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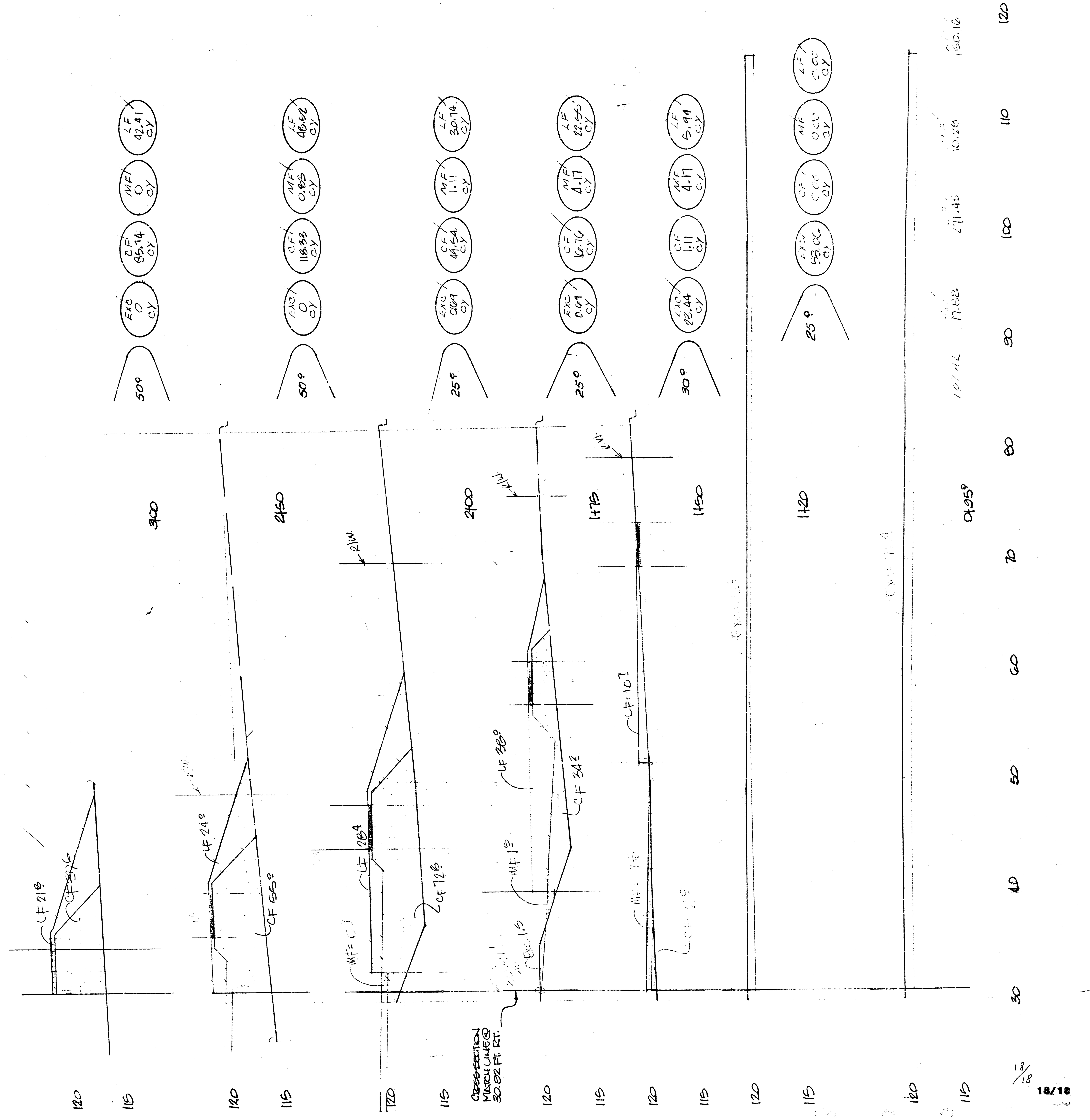
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