

GENERAL NOTES:

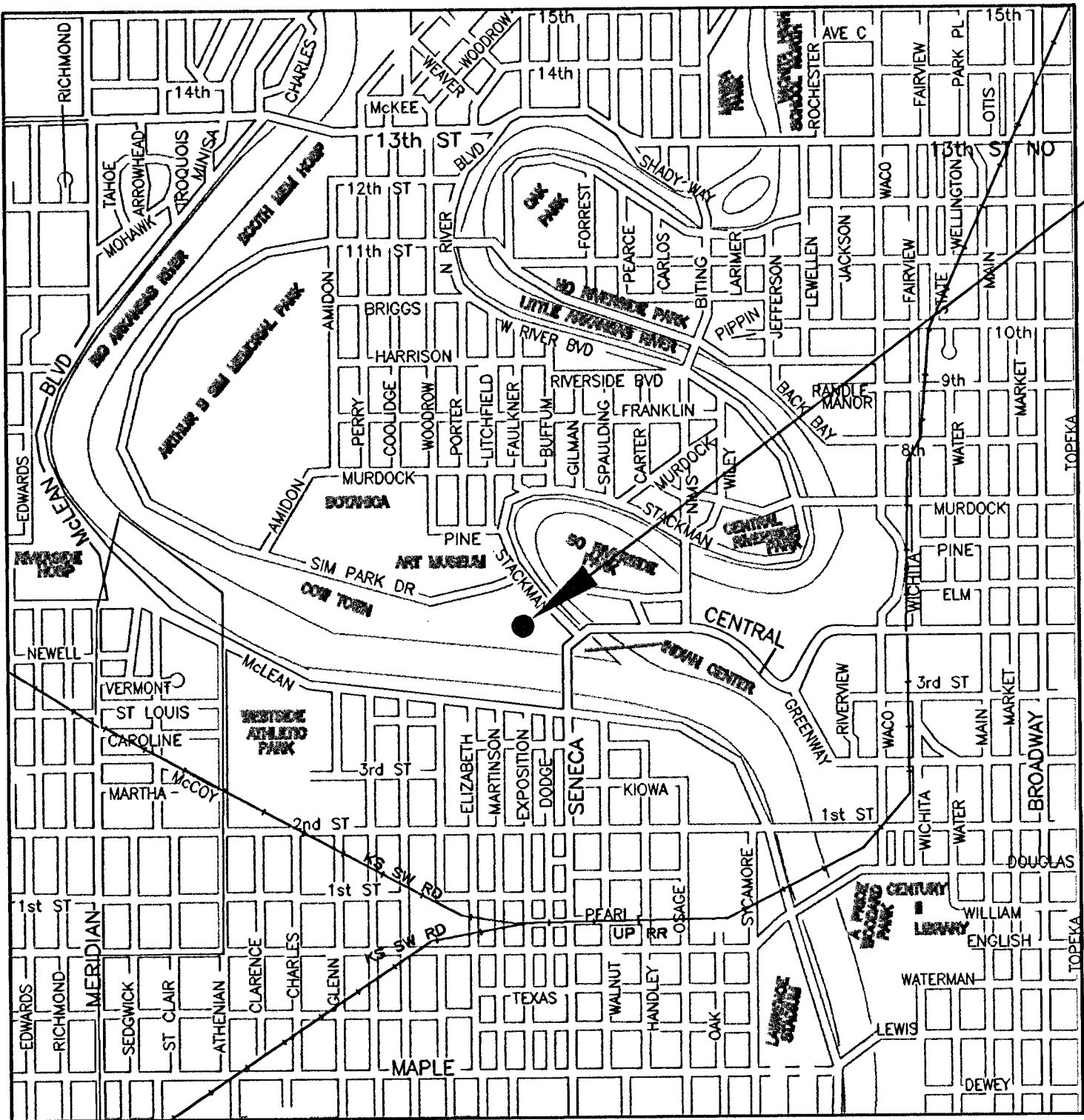
- Utility service lines, poles, valve boxes, meters, etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Contractor is solely responsible to notify and to make any necessary arrangements with utility companies for any needed adjustments of utility facilities prior to start of work.
- Contractor will be required to provide as minimum advance notice of forty-eight (48) hours to utility companies prior to starting any excavation as follows:

Kansas One Call	687-2470
Southwestern Bell Telephone Company	1-316-571-2611
Cablevision	262-4270 or 263-2061
KPL Gas Service	263-7511
Kansas Gas and Electric	264-1141
City of Wichita Water Department	268-4908
City of Wichita Sewer Department	268-4071
ARKLA Gas Company	942-8350 or 263-8161
- 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.
- Limits of earthwork shall match existing ground elevations at the right-of-way line unless otherwise noted on the plans. Where the new finished grade elevations do not match the existing ground elevations, the earthwork shall extend one foot beyond the right-of-way line and then sloped up or down using permissible slopes to match the existing ground surface.
- The Contractor must examine the construction site prior to bidding and be satisfied as to the work shown for completion. After bids have been received, the Contractor shall not assert that there was a misunderstanding of the quantities of work or of the nature of the work to be completed.
- All construction and materials, unless otherwise noted, to comply with City of Wichita specifications and standards.
- Rubble Removal - 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 will require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to US 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. The cost of disposing of rubble from the removal of miscellaneous structures and excess excavation, including loading and hauling shall be subsidiary to the other bid items.
- 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. This cost is subsidiary to other bid items.
- 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. This cost is subsidiary to other bid items.
- A saw 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 where proposed abuts an existing surface course or pavement removal. 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 other bid items.
- Street to be closed during construction except for temporary access coordinated with the adjacent properties. The Contractor shall use construction methods which shall minimize inconvenience to residents in the project area. Contractor will be required to make special access provisions for any handicapped residents within the project area whose normal access would otherwise be impaired.
- Sealant: PECORA Aluminum Stone Urexpam NR-200 Uretane Sealant or approved by Engineer.

PARKING LOT ON TOP OF
10.6 MILLION GALLON RESERVOIR
MAY 1997

CITY OF WICHITA, KANSAS
M. E. LINDEBAK, P.E. - CITY ENGINEER

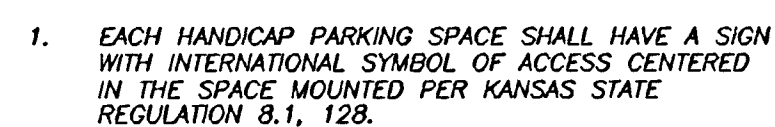
472-83026
INDEX CODE: 633508



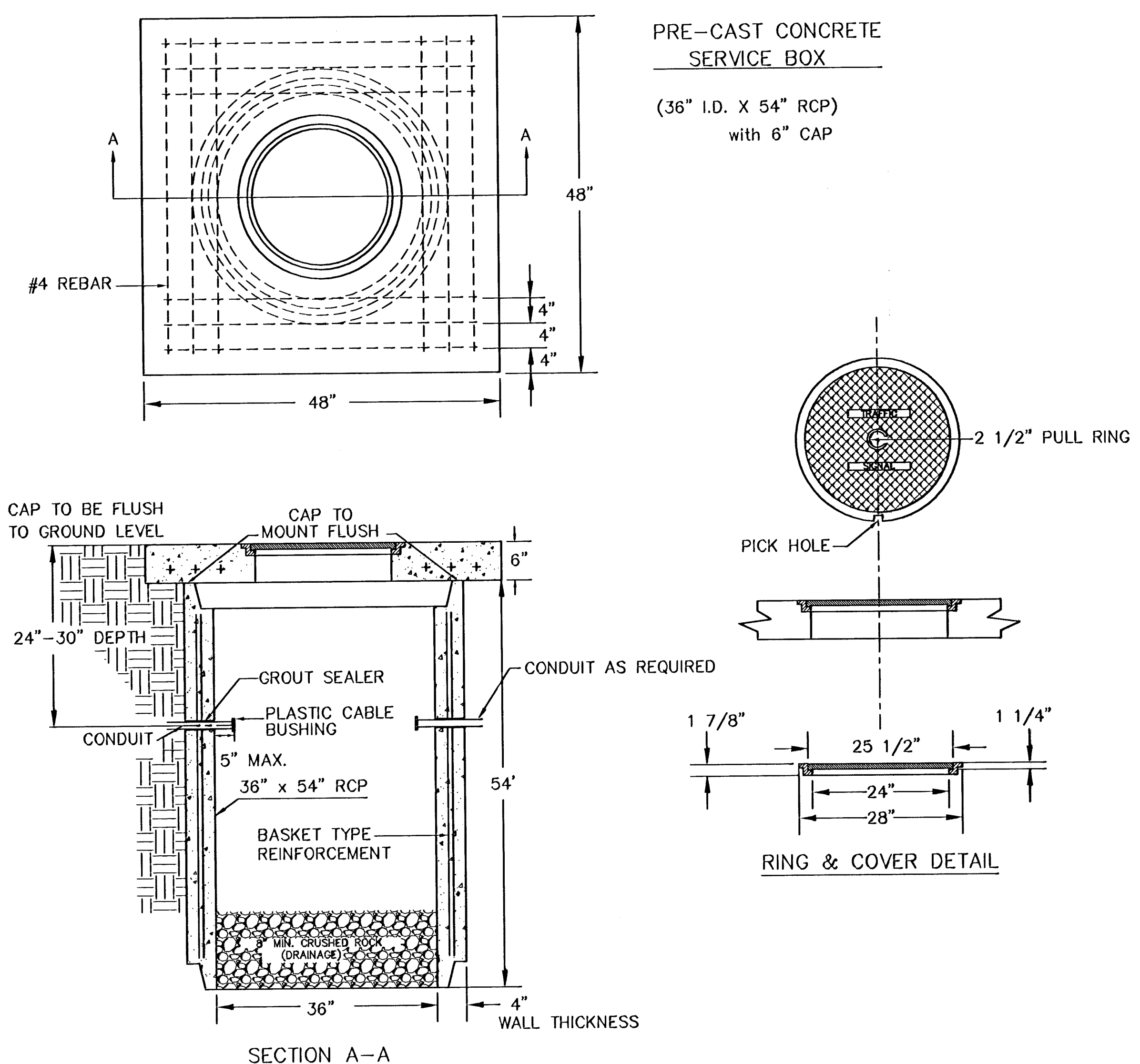
PROJECT LOCATION

INDEX OF SHEETS

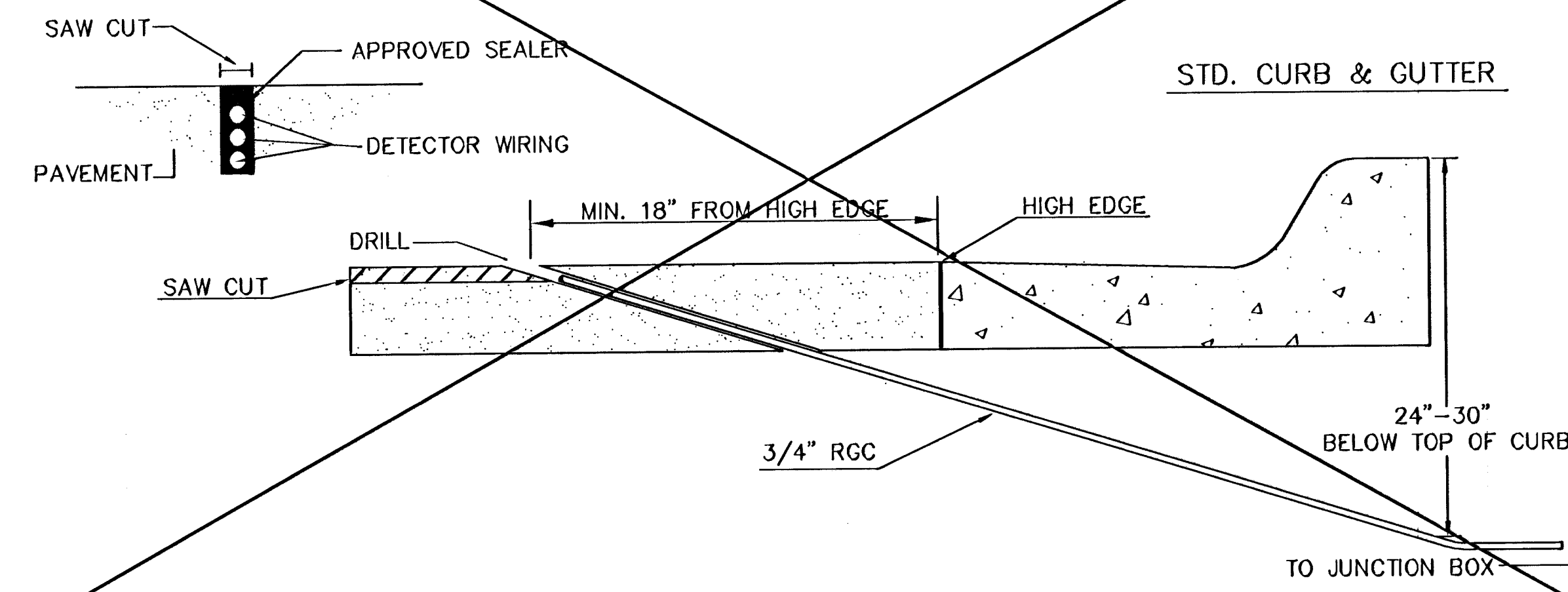
SHEET G-1	-	PAVING PLAN
SHEET G-2	-	GRADING PLAN
SHEET D-1	-	PAVING DETAIL
SHEET D-2	-	BRICK SIDEWALK DETAIL
SHEET D-3	-	DROP INLET DETAIL



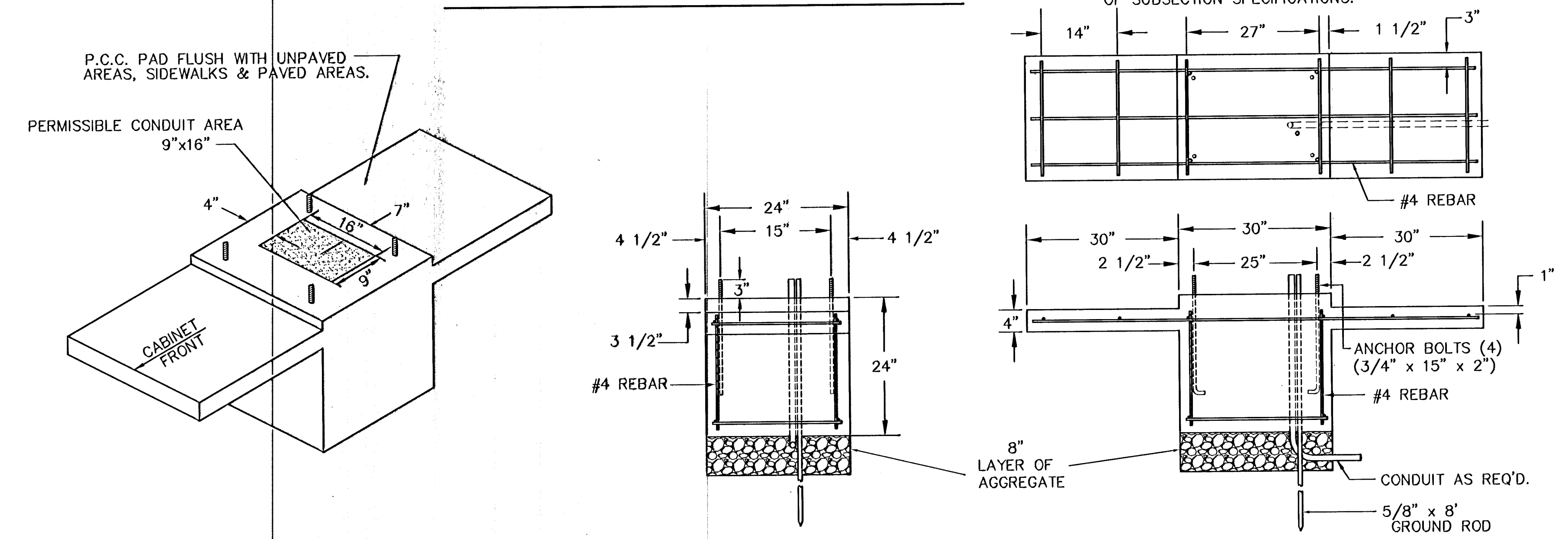
SERVICE BOX CONSTRUCTION/INSTALLATION DETAILS



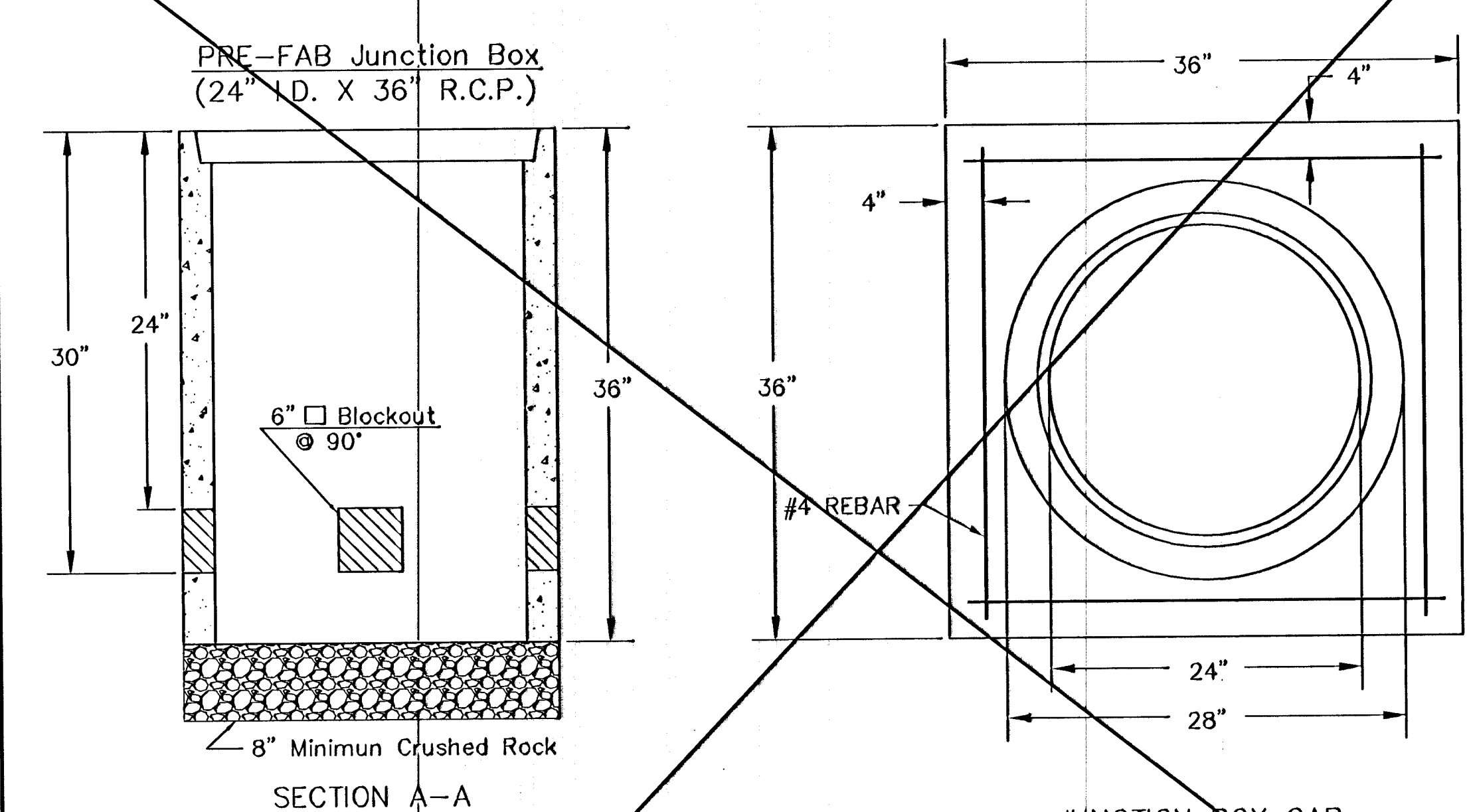
CONDUIT/DETECTOR WIRE INSTALLATION DETAILS



170 CONTROLLER PAD DETAILS



JUNCTION BOX DETAILS



JUNCTION BOX CAP
36" x 36" x 6"
TOP OF CAP TO BE FLUSH WITH GROUND LEVEL.

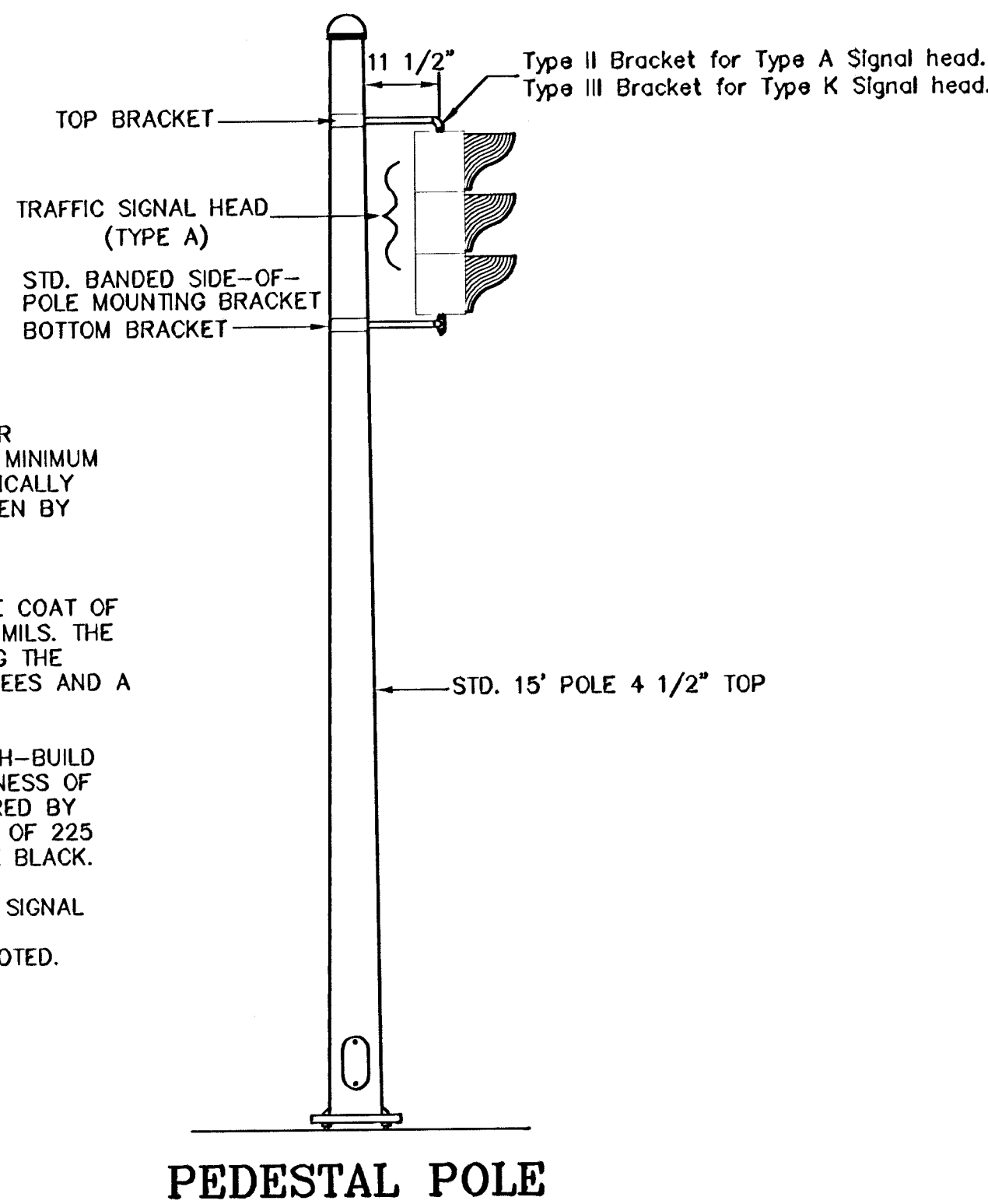
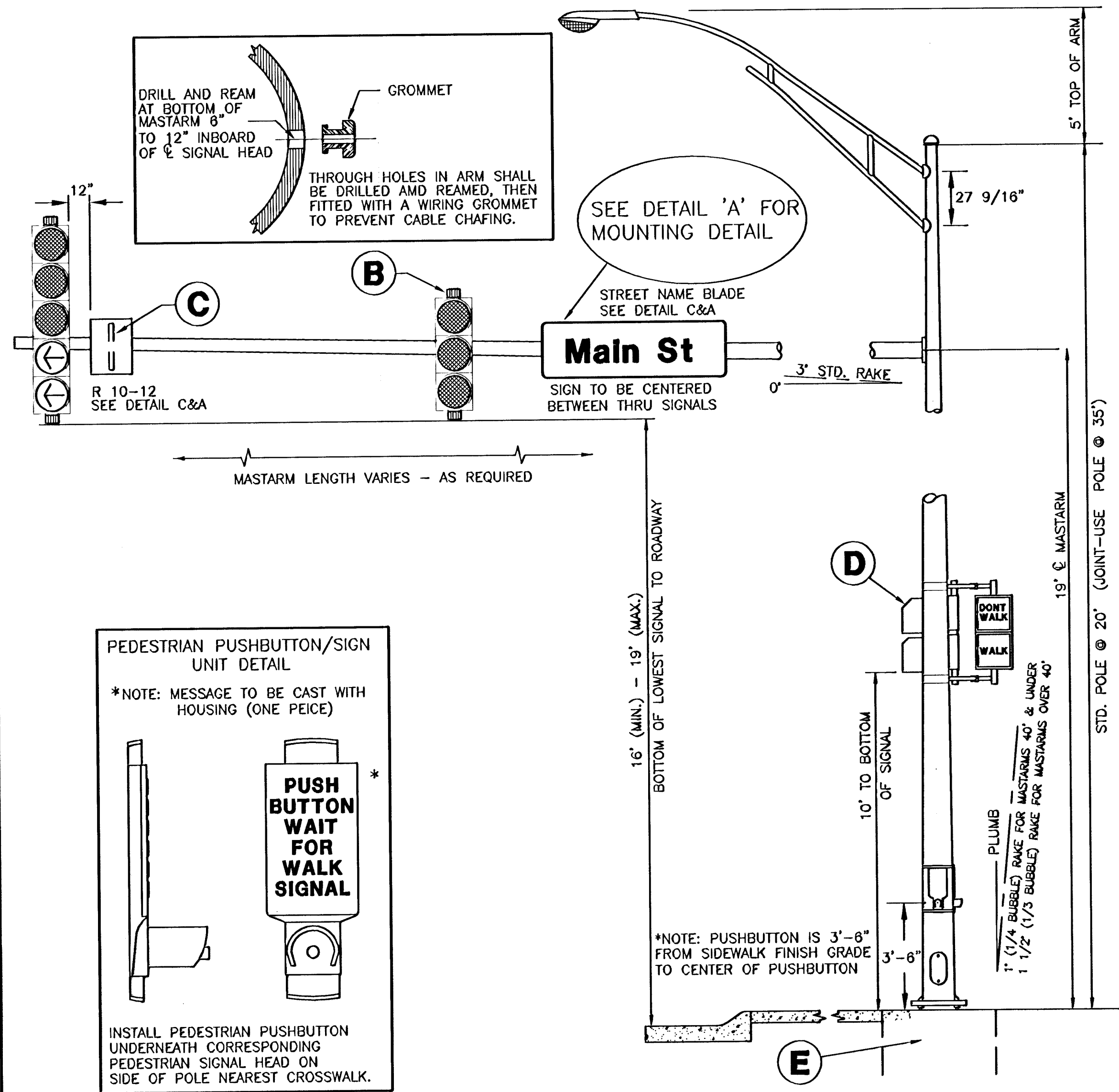
NOTES:

- SERVICE & JUNCTION BOX:
- CONDUIT CONNECTION TO BE FLUSH TO WITHIN 125 mm OF INSIDE FACE OF SIDE WALL, CONDUIT TO DRAIN INTO SERVICE BOX.
 - CONDUIT CONNECTIONS TO SERVICE BOX SHALL BE TERMINATED WITH PLASTIC CABLE BUSHING.
 - CONDUIT SHALL BE SEALED WITH APPROVED SEALER AT INSIDE WALL FACE.
 - ALL SERVICE & JUNCTION BOXES TO HAVE 200 mm OF CRUSHED ROCK.
- TRENCHING:
- DEPTH TO BE 30" MINIMUM WITH ROCK & STUBBLE FREE BACKFILL TO SERVE AS BEDDING MATERIAL. MAINTAIN MINIMUM CONDUIT DEPTH IN TRENCH.
 - BACKFILL TO BE COMPACTED IN 6" LOOSE LIFTS BY HAND OR MECHANICAL TAMPING TO A 95% STANDARD DENSITY.
- CONDUIT:
- SLOPE CONDUIT TO DRAIN AS DIRECTED BY THE ENGINEER.
 - 3" RIGID STEEL CONDUIT BTWN. SERVICE BOXES.
1 1/4" " " " BTWN. SERVICE & JUNCTION BOXES.
3/4" " " " BTWN. JUNCTION BOXES.
3/4" " " " BTWN. JUNCTION BOX & DETECTOR LOOP SAW CUT

"SEE SERVICE BOX INSTALLATION FOR RING & COVER DETAILS.

REV. DATE	COMMENTS	INT

PROJECT DESCRIPTION			
SERVICE/JUNCTION BOX, CONTROLLER PAD CONSTRUCTION/INSTALLATION DETAILS			
PROJECT NUMBER			
DRAWN BY: T.M.		APPROVED BY:	
DATE: Apr. 98		REVISION: DATE:	
CITY OF WICHITA			
DEPARTMENT OF PUBLIC WORKS			
TRAFFIC ENGINEERING DIVISION		SCALE: 5/7	
PAUL GUNZELMAN, P.E.		TRAFFIC ENGINEER	
NO SCALE		SHEET/OF	



NOTE:

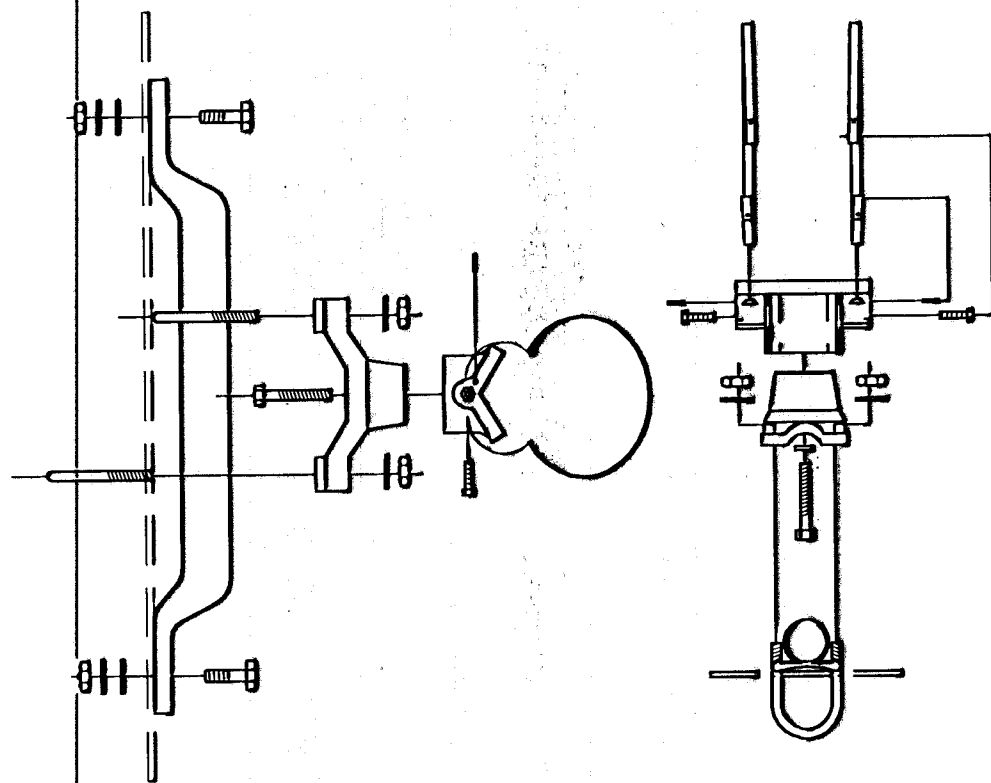
SPECIAL FINISH FOR TRAFFIC SIGNAL STRUCTURES: ALL EXTERIOR SURFACES ARE COATED WITH A ZINC RICH EPOXY POWDER TO A MINIMUM DRY FILM THICKNESS OF 2.0 MILS. THE COATING IS ELECTROSTATICALLY APPLIED AND PARTIALLY CURED IN A GAS FIRED CONVECTION OVEN BY HEATING THE STEEL SUBSTRATE TO A MINIMUM OF 250 DEGREES FAHRENHEIT.

THE POWDER PRIMED SURFACE IS COATED WITH AN INTERMEDIATE COAT OF POLYESTER POWDER TO A MINIMUM DRY FILM THICKNESS OF 2.0 MILS. THE COATING IS ELECTROSTATICALLY APPLIED AND CURED BY HEATING THE SUBSTRATE IN A CONVECTION OVEN TO A MINIMUM OF 350 DEGREES AND A MAXIMUM OF 400 DEGREES FAHRENHEIT.

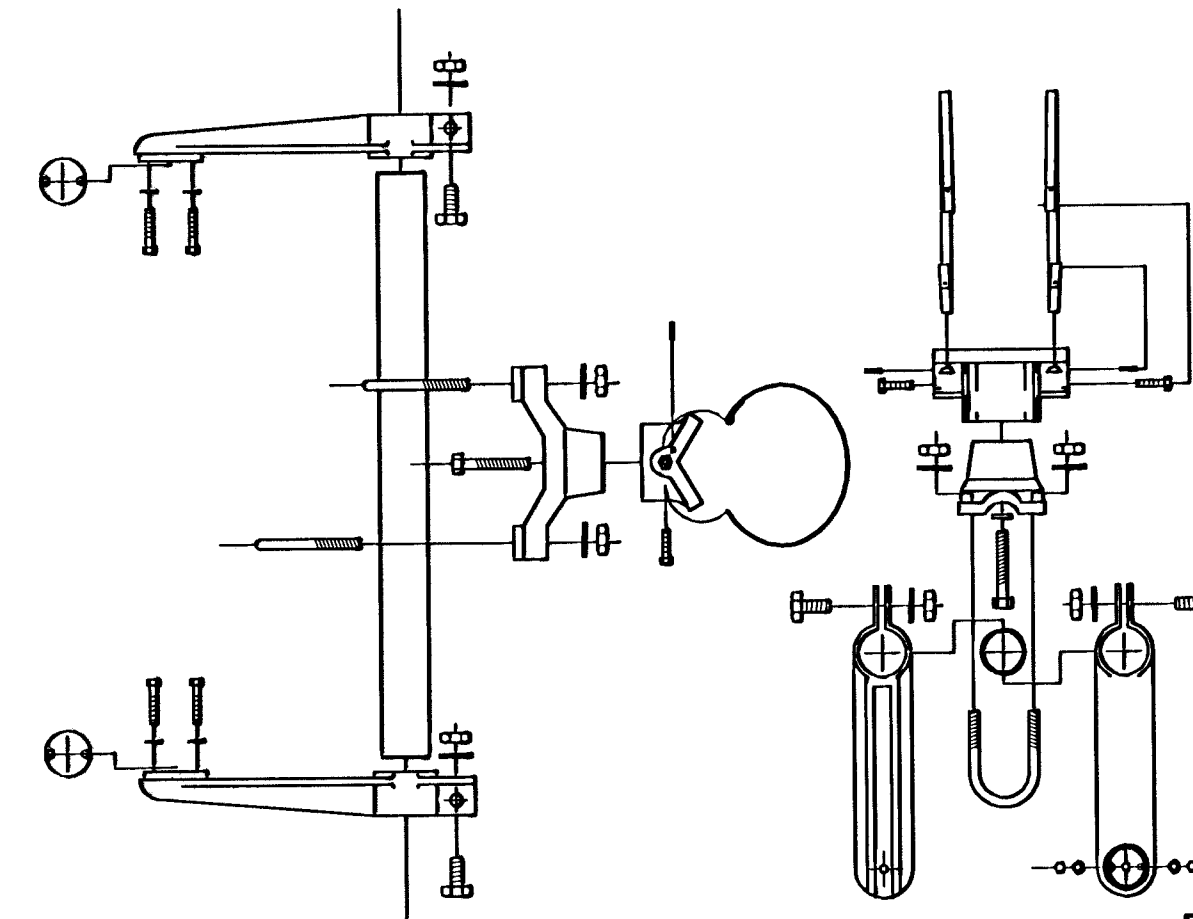
THE INTERMEDIATE COAT IS TOP COATED WITH ONE COAT OF HIGH-BUILD ACRYLIC POLYURETHANE ENAMEL TO A MINIMUM DRY FILM THICKNESS OF 2.0 MILS. THE COATING IS ELECTROSTATICALLY APPLIED AND CURED BY HEATING THE SUBSTRATE IN A CONVECTION OVEN TO A MINIMUM OF 225 DEGREES FAHRENHEIT. THE FINAL TOP COATING COLOR SHALL BE BLACK.

THE COLOR OF EXTERIOR SURFACE OF ALL STRUCTURES, POLES, SIGNAL HEADS, BRACKETS, EQUIPMENT, CABINETS, COVERS, PANELS AND COMPONENTS SHALL BE MATCHING BLACK, UNLESS OTHERWISE NOTED.

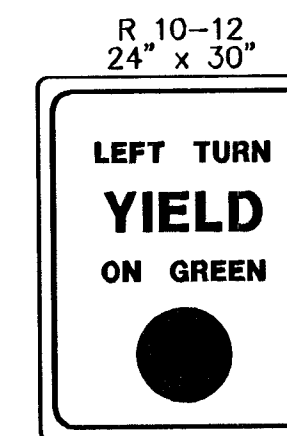
BANDED SIGN MOUNTING BRACKET DETAIL



TYPE I SIGNAL MOUNTING BRACKET ASSEMBLY DETAIL



STANDARD SIGNING



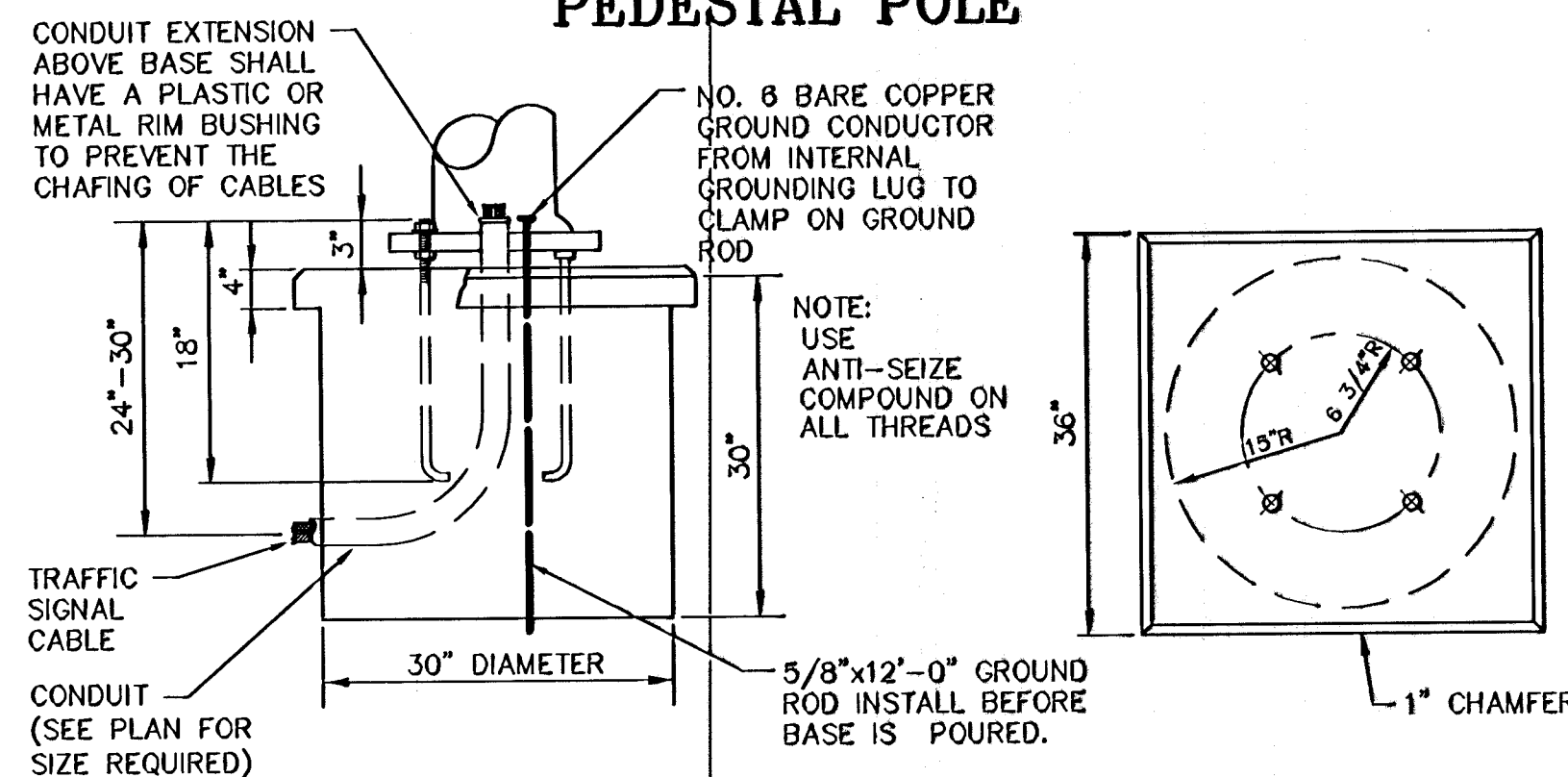
SEE DETAIL "A" FOR MOUNTING HARDWARE

60" x 18"

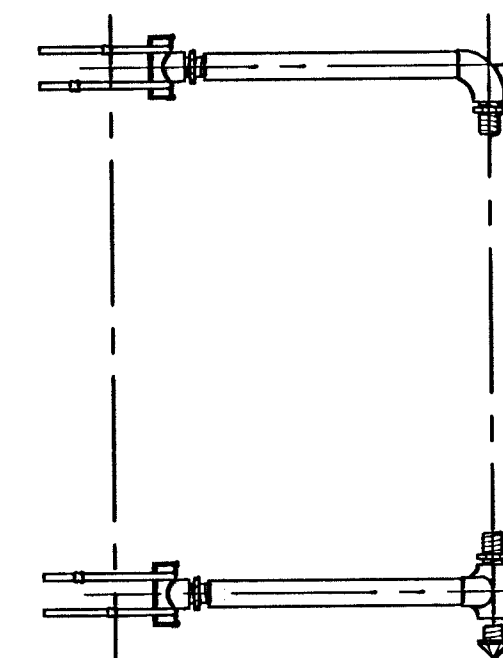
Street Name

SEE DETAIL "A" FOR MOUNTING HARDWARE USE 2 PER SIGN

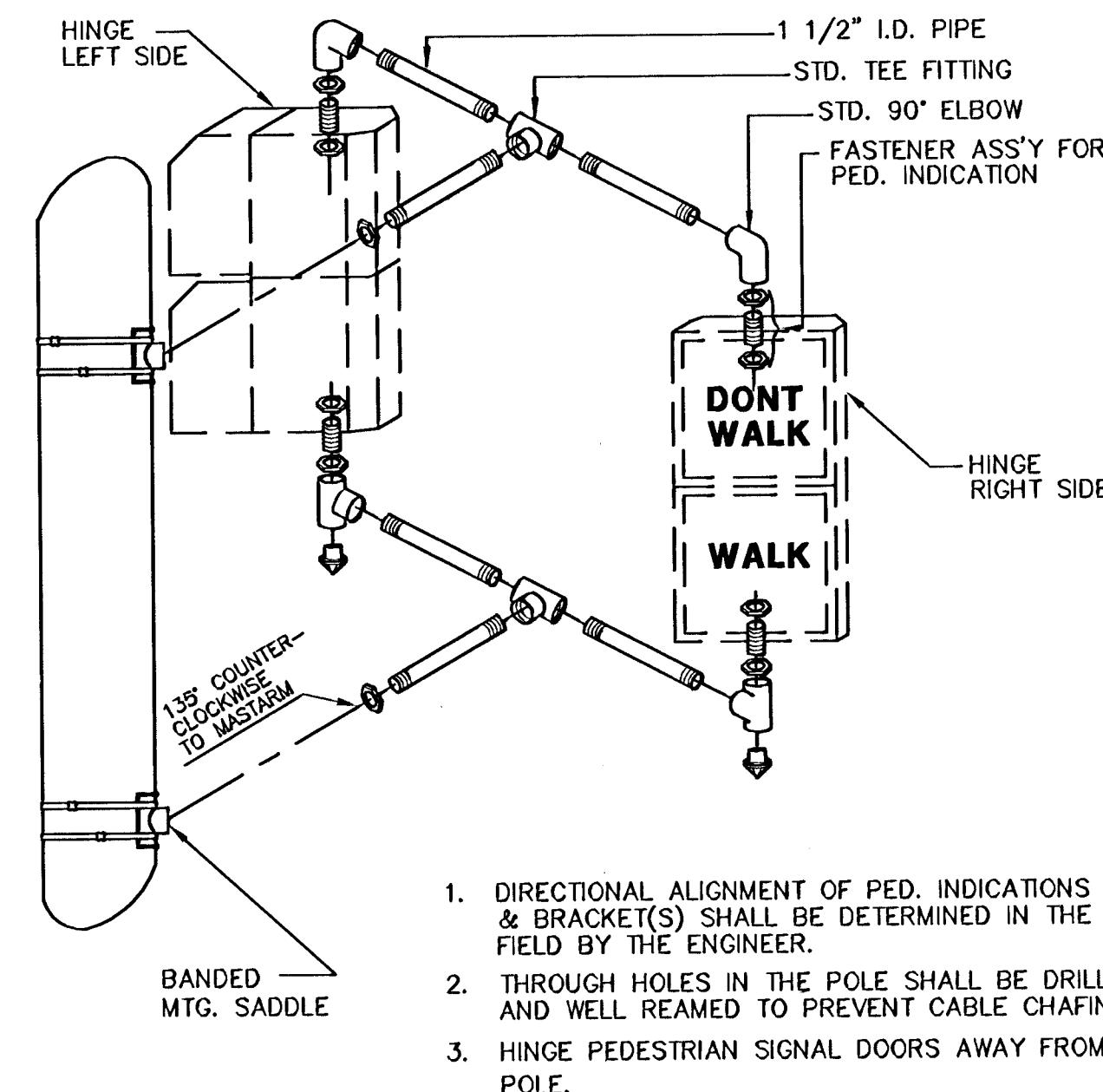
CONCRETE BASE DETAILS PEDESTAL POLE



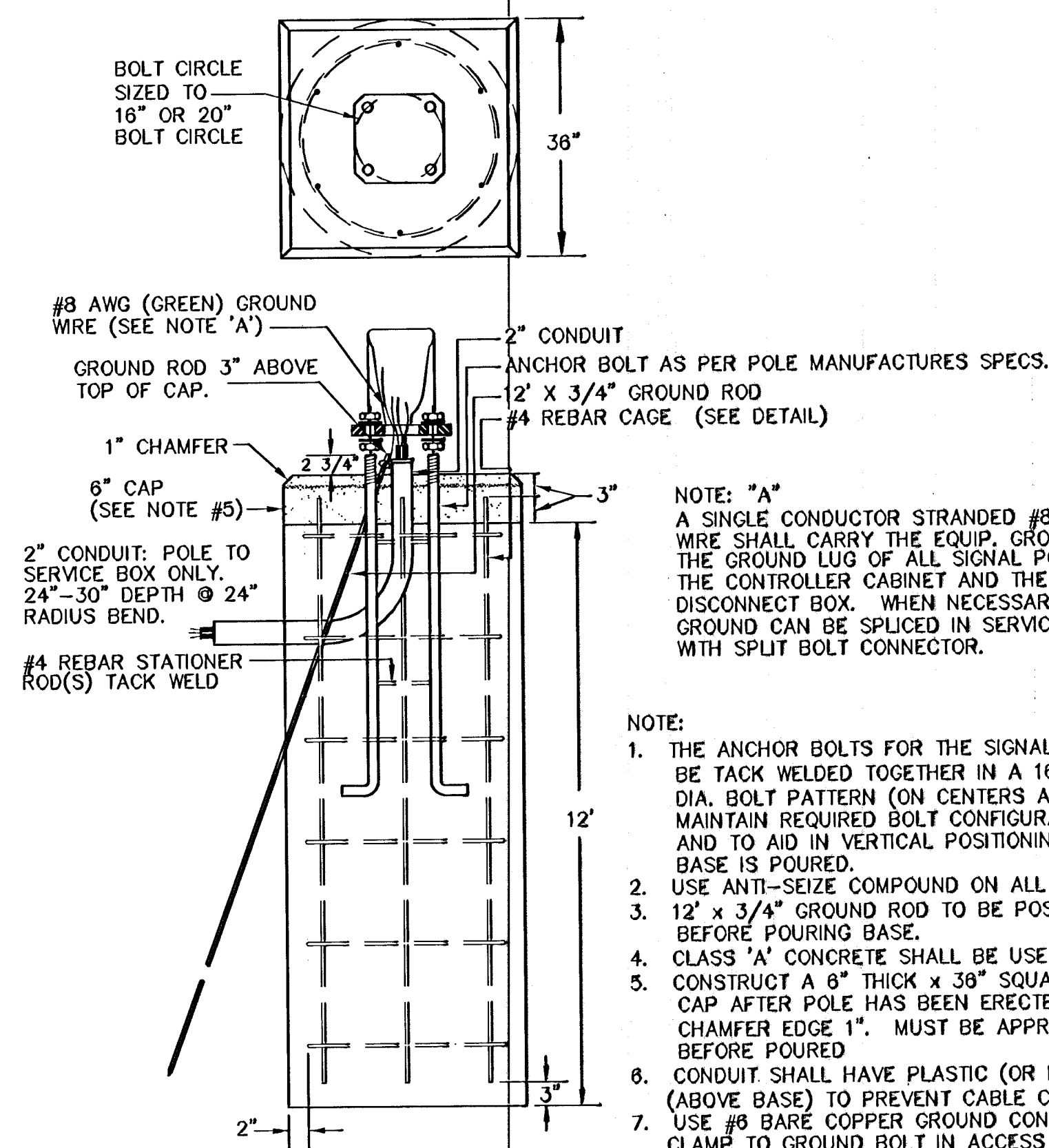
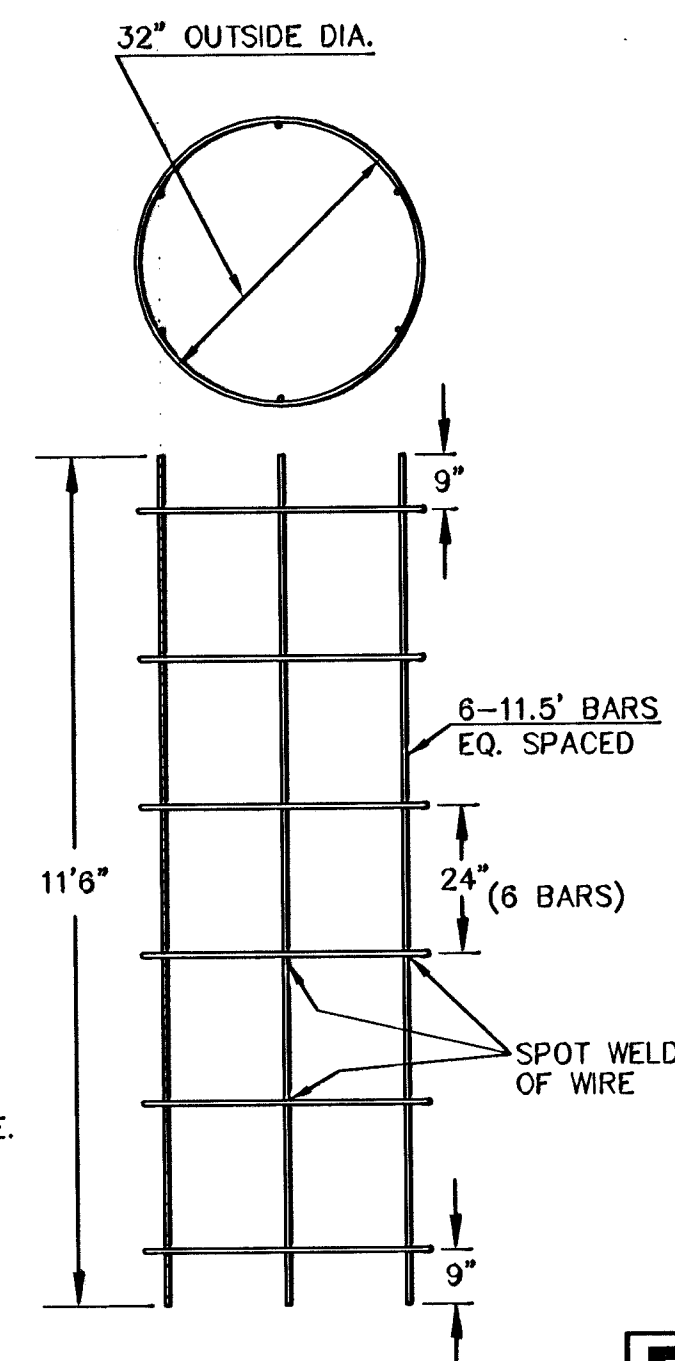
TYPE III SIDE-OF-POLE MOUNTING BRACKET ASSEMBLY



TYPE II SIDE-OF-POLE SIGNAL MOUNTING BRACKET ASSEMBLY

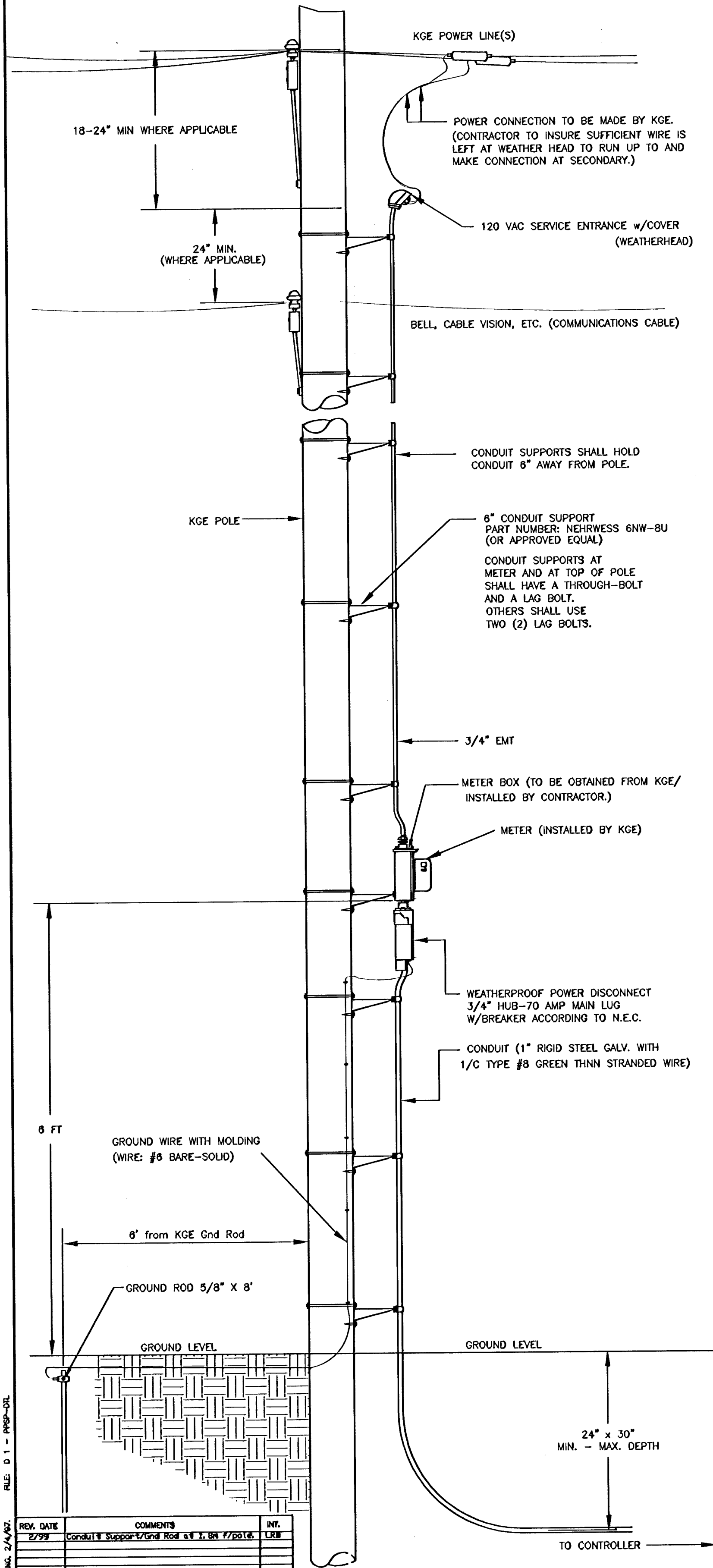


REBAR CAGE



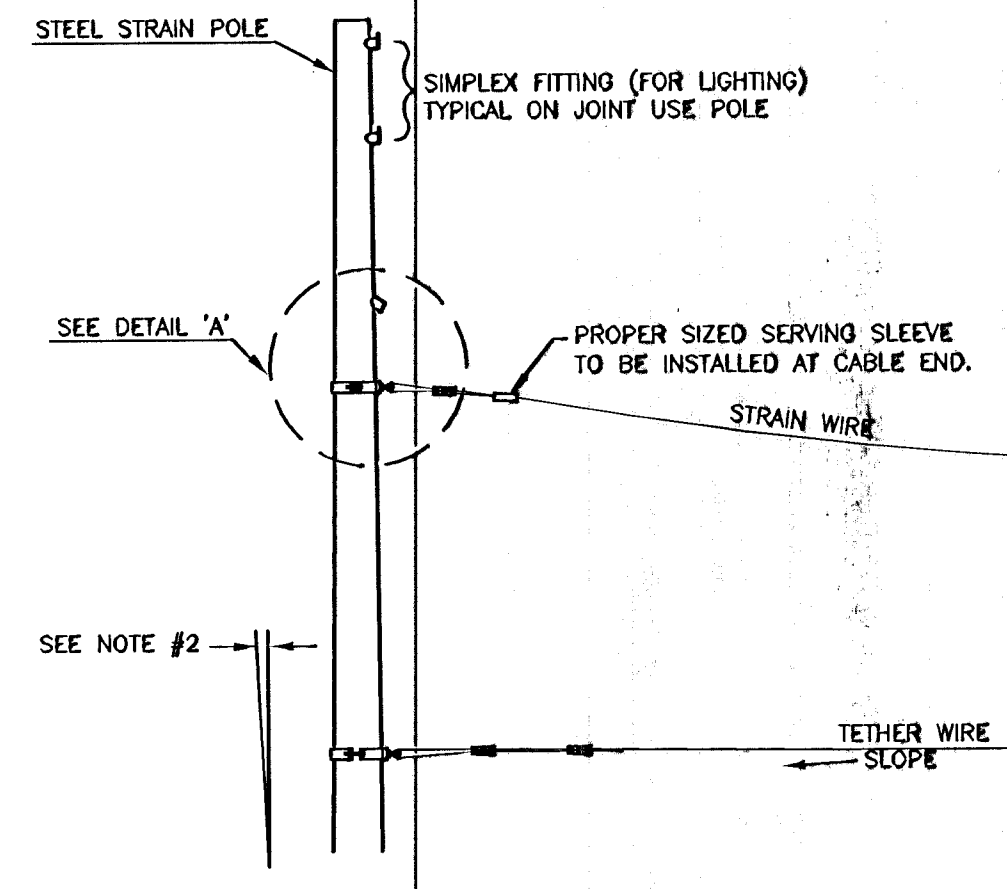
PROJECT DESCRIPTION			
STEEL SIGNAL POLE ASSEMBLY DETAILS			
PROJECT NUMBER			
472-82858			
DRAWN BY: T.M.		APPROVED BY	
DATE: FEB. 98		REVISED BY: T.M.	
		DATE: MAY, 97	
CITY OF WICHITA DEPARTMENT OF PUBLIC WORKS			
DIVISION OF TRAFFIC ENGINEERING		SCALE	6 / 7
PAUL GUNZELMAN, P.E. TRAFFIC ENGINEER		NO SCALE	SHEET / OF

POWER POLE DETAILS



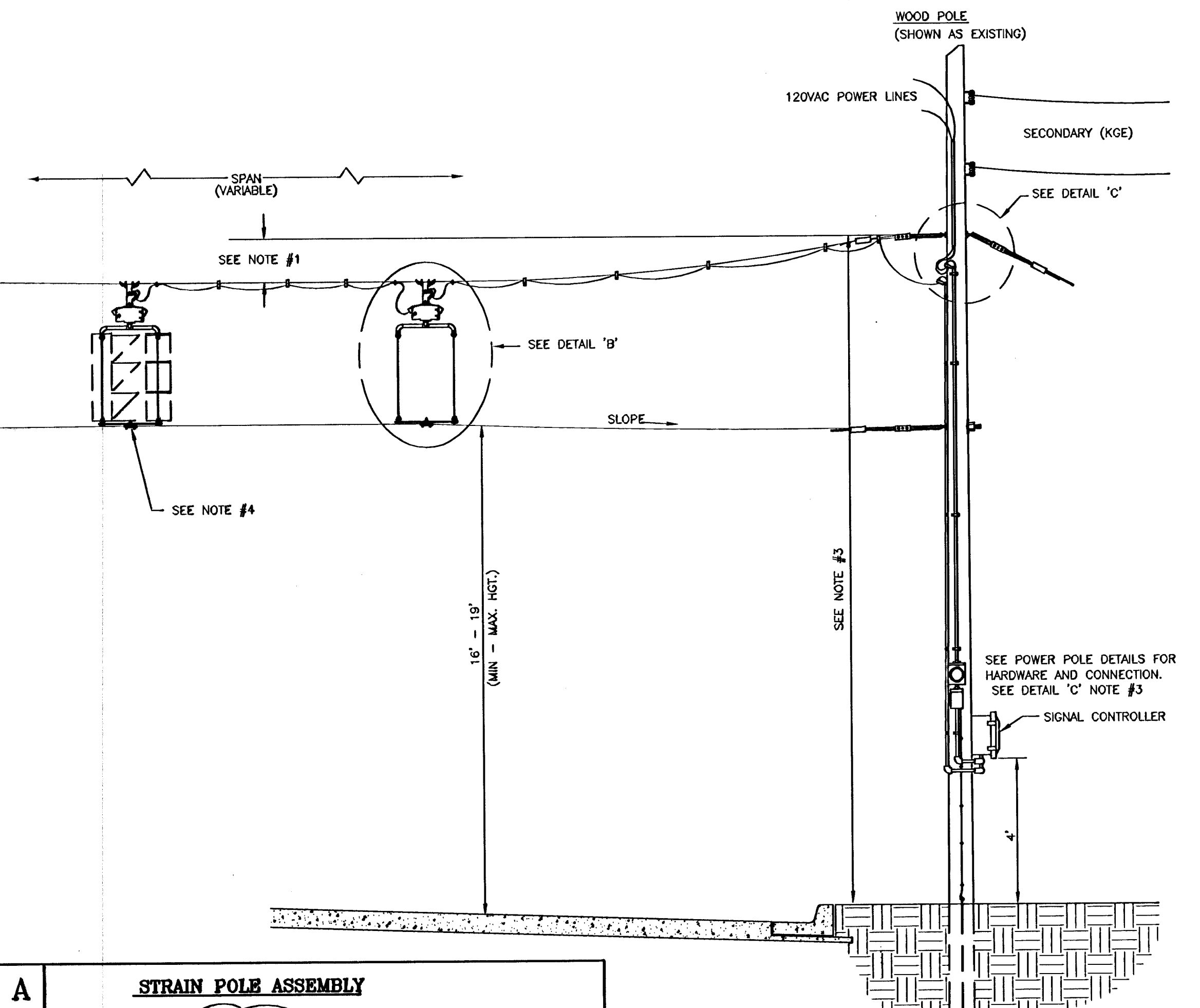
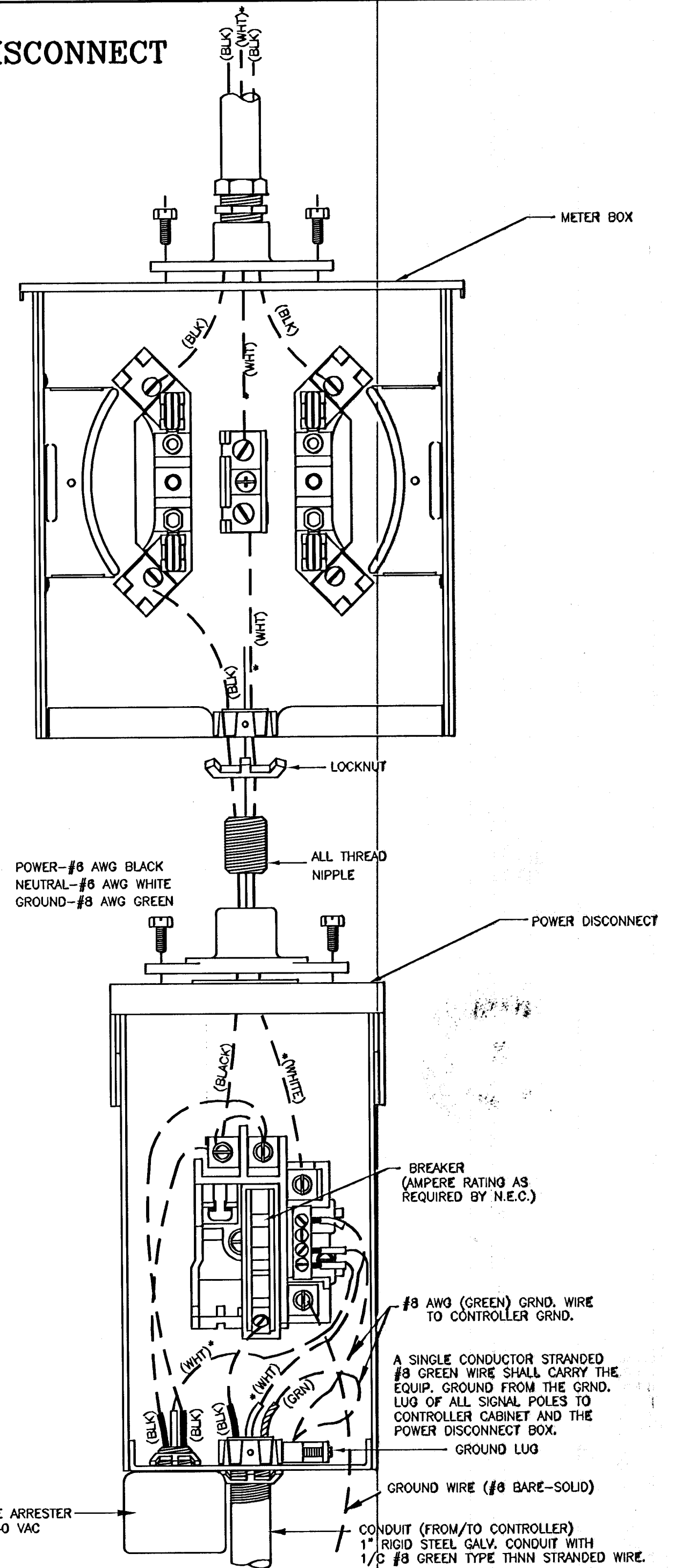
SPANWIRE ASSEMBLY DETAILS

1. MAX. SAG = 5% OF SPAN.
2. STANDARD BACKRAKE = 1.5'
3. HEIGHT OF STRAIN WIRE HOOK-UP TO BE DETERMINED BY FIELD ENGINEER. TRAFFIC SIGNAL CABLE TO BE SECURED TO STRAIN (SPAN) WIRE WEATHERABLE NYLON CABLE HANGERS (12" CTR.) DETAIL 'B'
4. TETHER CLAMP TO BE DESIGNED TO RELEASE UNDER 'HIGH WIND LOAD' TO PERMIT SIGNAL 'FREE SWING'.

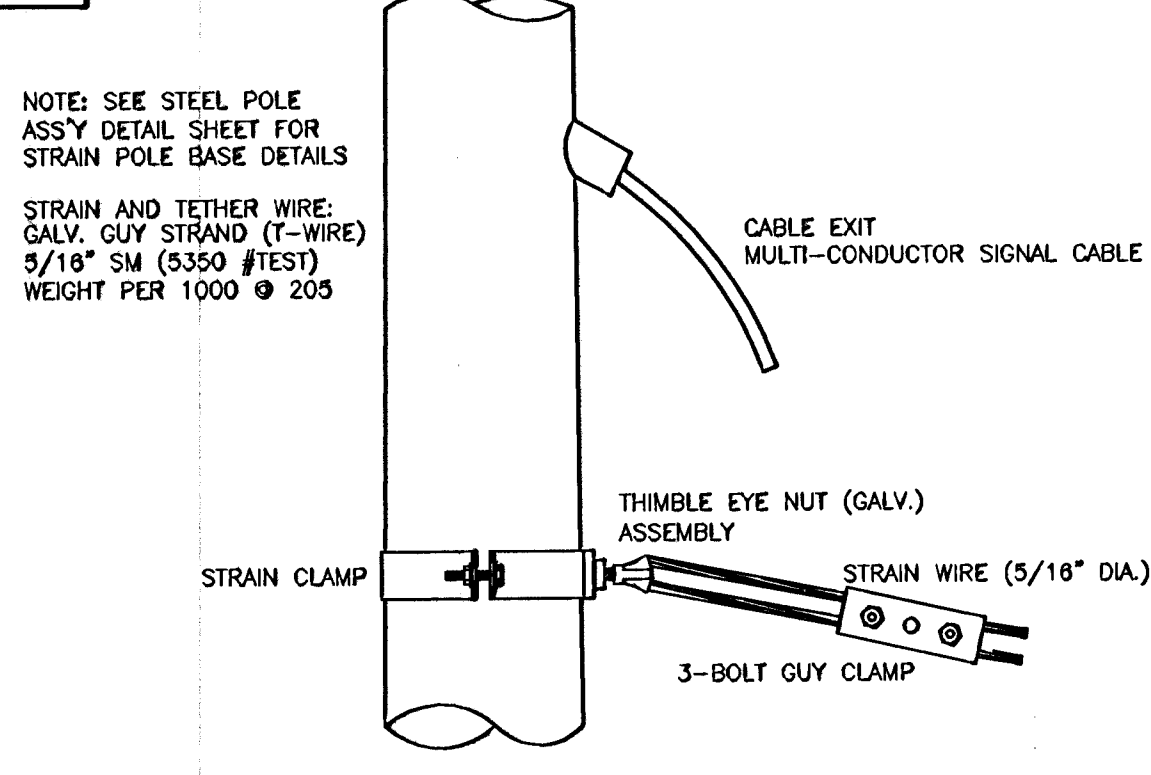


METER BOX & POWER DISCONNECT DETAILS

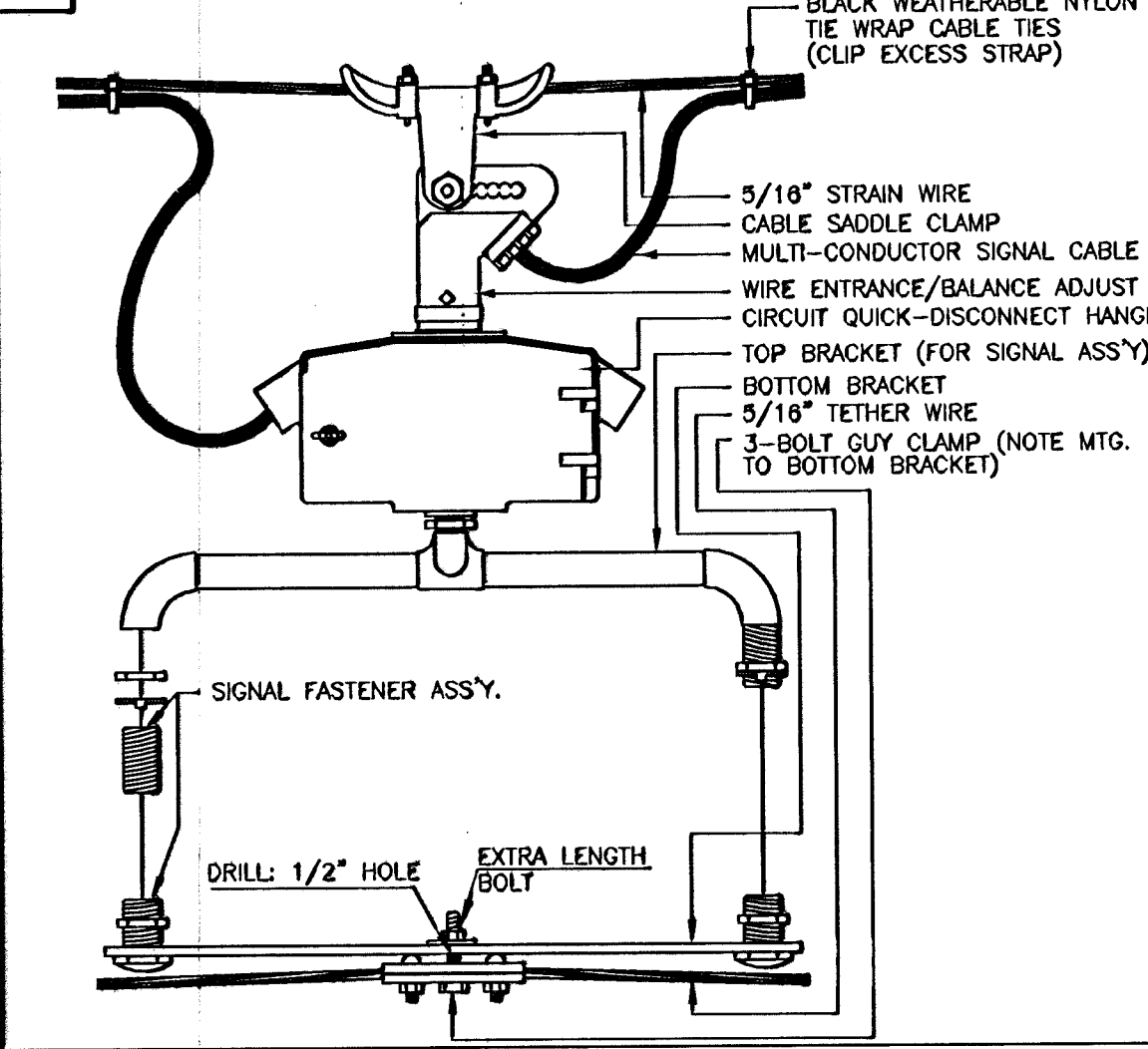
NOTE:
• TO BE MARKED WITH WHITE TAPE



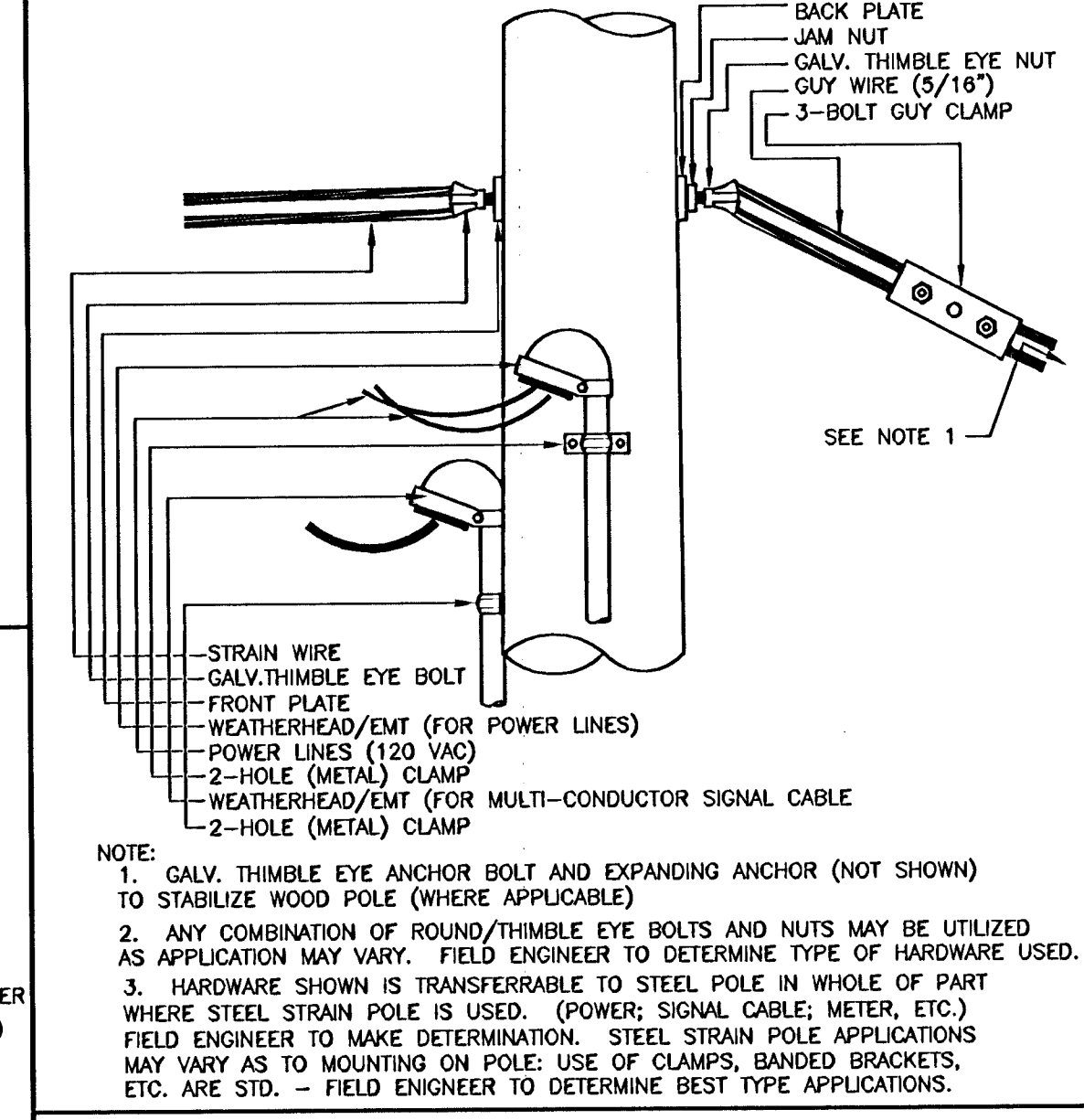
A STRAIN POLE ASSEMBLY



B SIGNAL BRACKET ASSEMBLY DETAILS



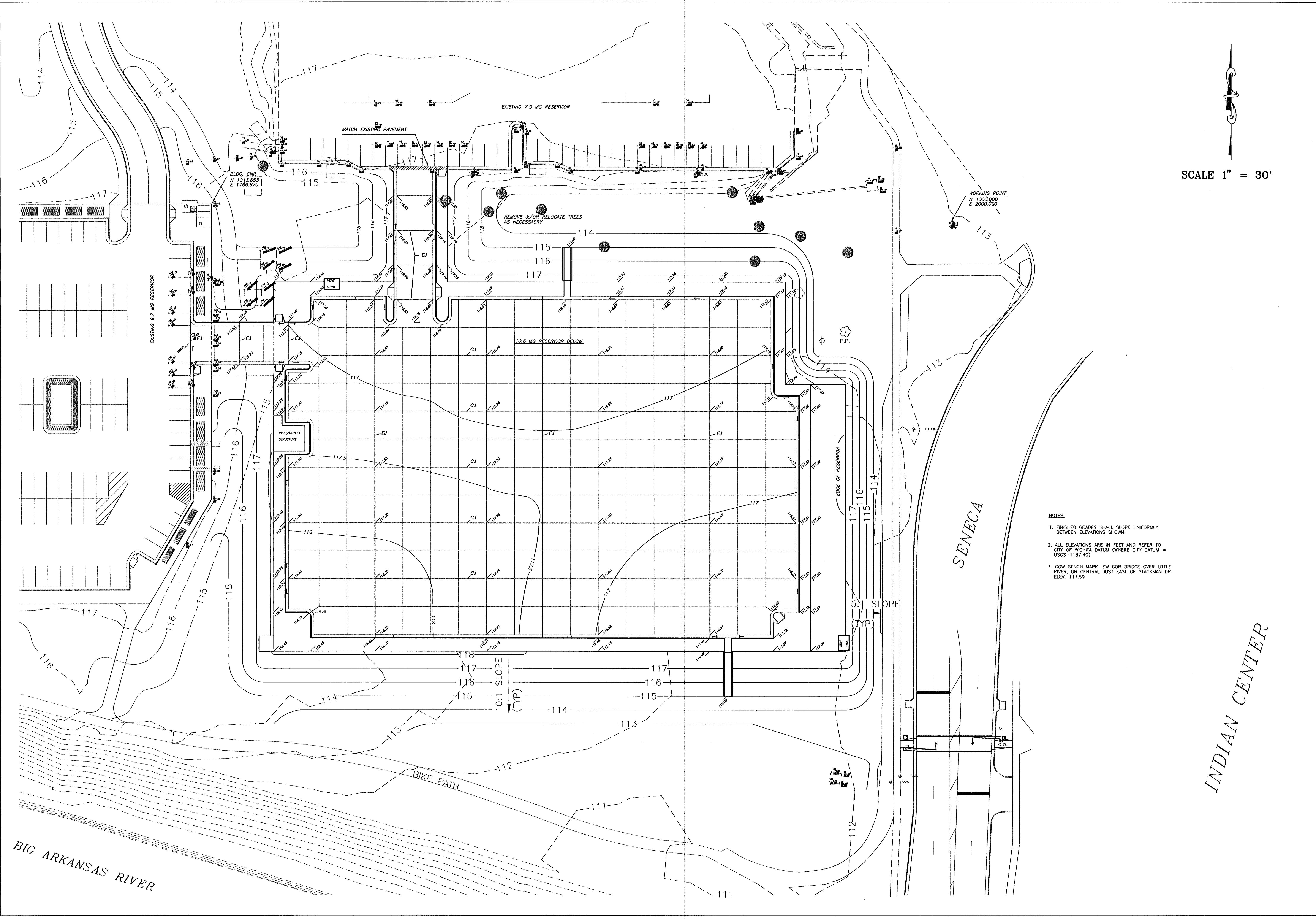
C WOOD POLE ASSEMBLY DETAILS KGE POLE EXCLUDED



PROJECT DESCRIPTION		
POWER POLE AND SPAN POLE ASSEMBLY DETAILS		
PROJECT NUMBER		
DRAWN BY: T.M.	APPROVED BY:	REVISED BY: L. B.
DATE: FEB. 98	DATE: 2/28/99	
CITY OF WICHITA DEPARTMENT OF PUBLIC WORKS		
DIVISION OF TRAFFIC ENGINEERING PAUL GUNZELMAN, P.E. TRAFFIC ENGINEER		SCALE NO SCALE 7/7 SHEET OF

J:\Civil\04238\dwg\signals\PPSP-DTL.dwg 8/10/2005 10:45:53 AM CST

C:\VOCARD\DRAWINGS\WASON\10 ENG\FEE-GRAD Mon Dec 22 09:20:20 1997



SCALE 1" = 30'

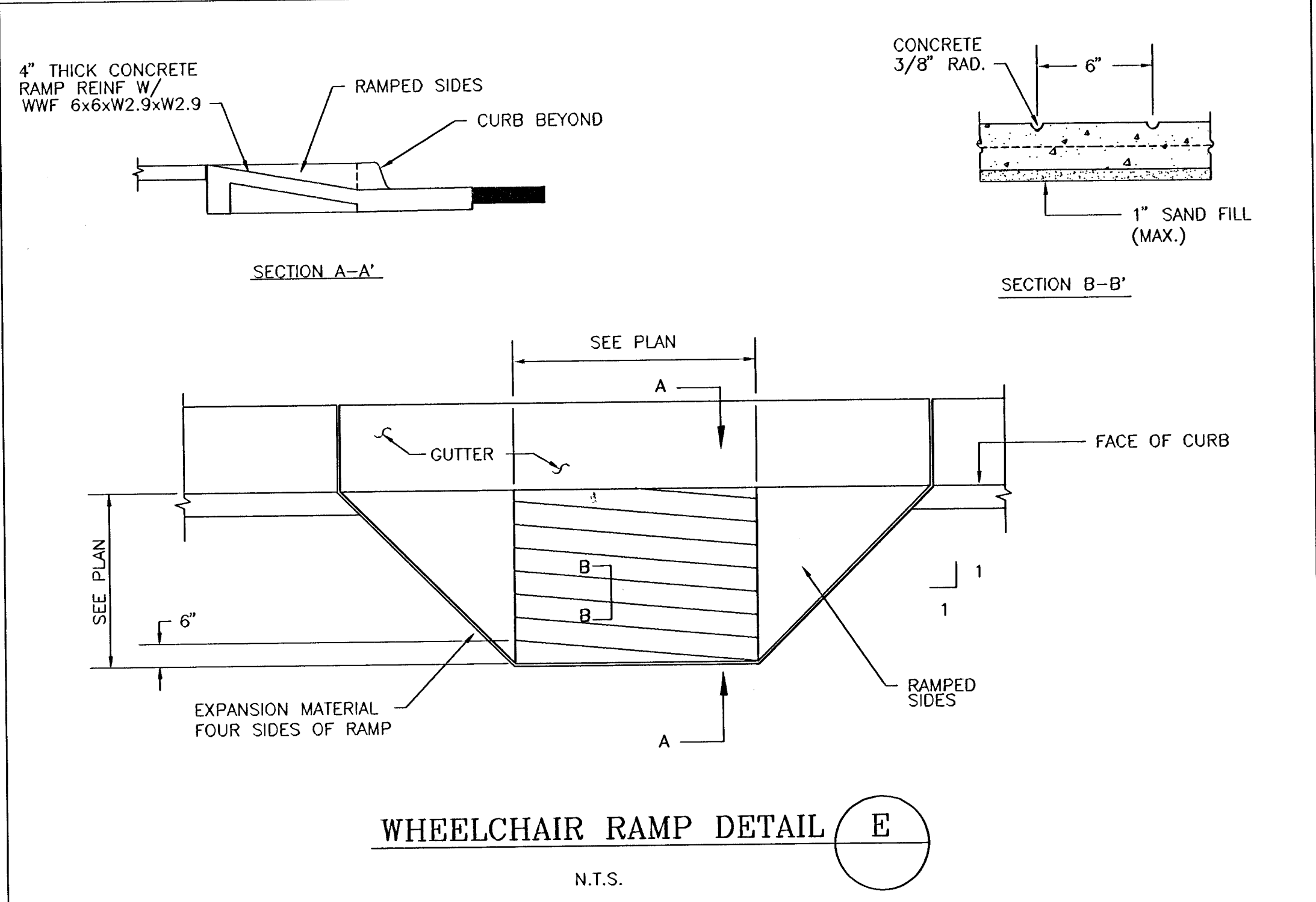
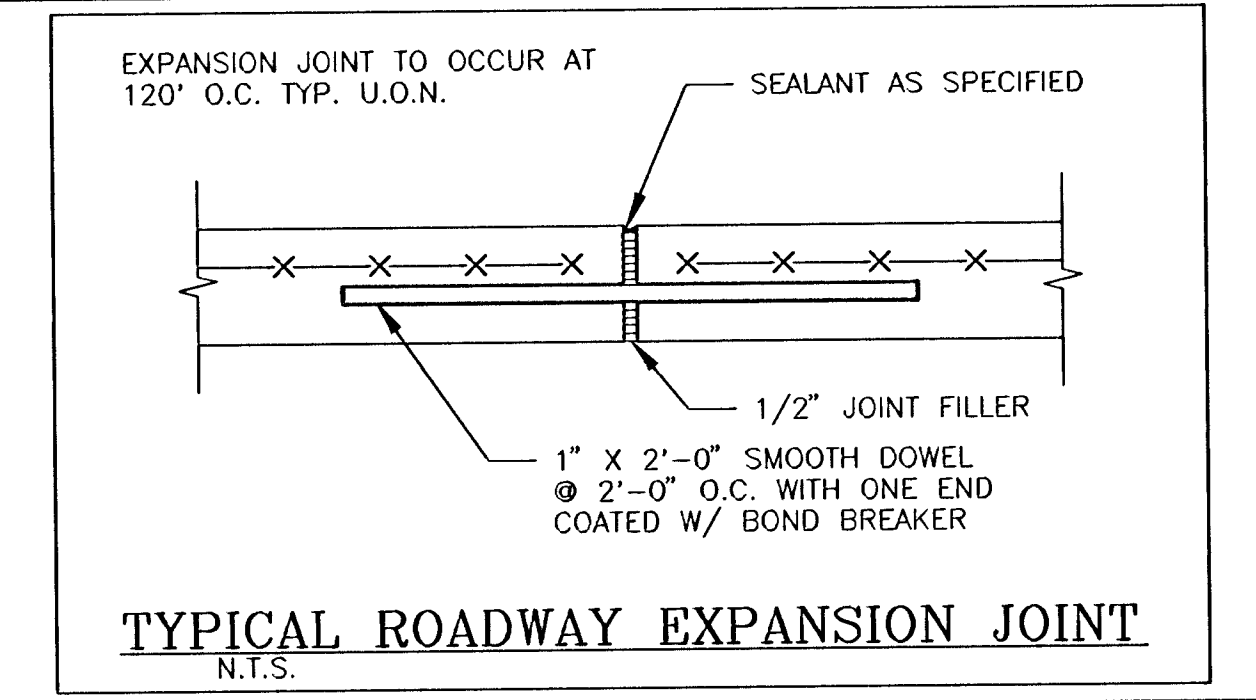
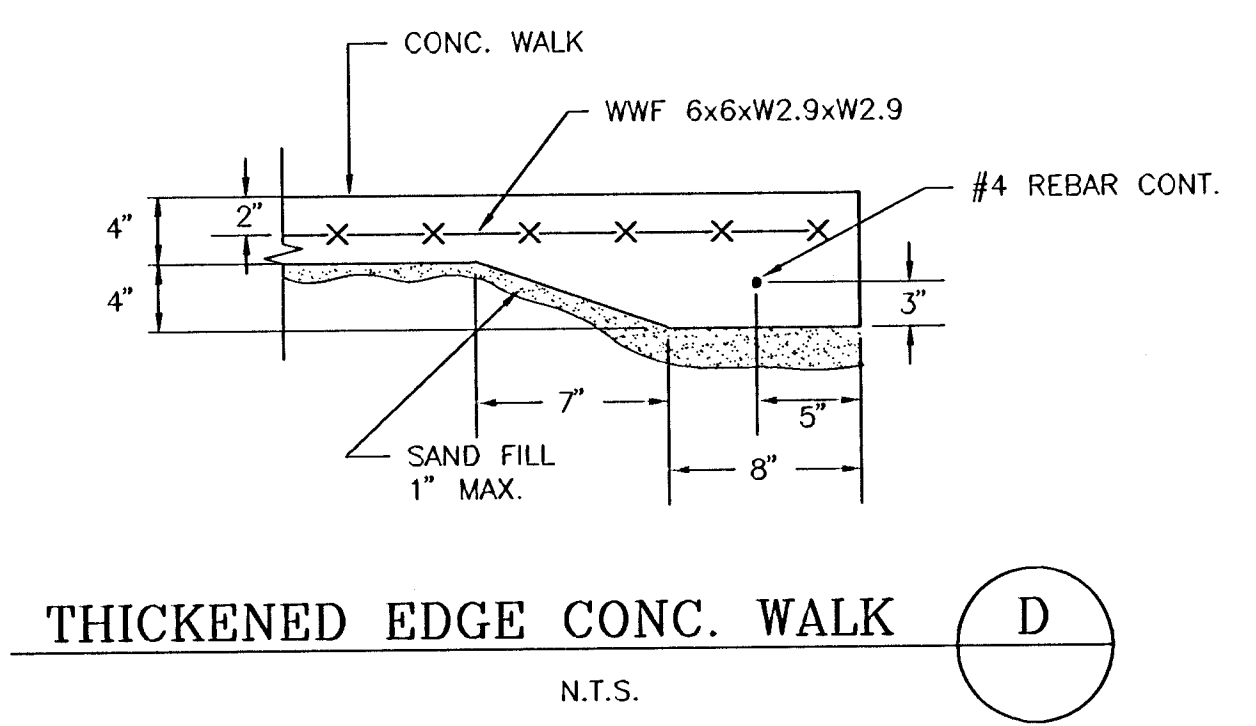
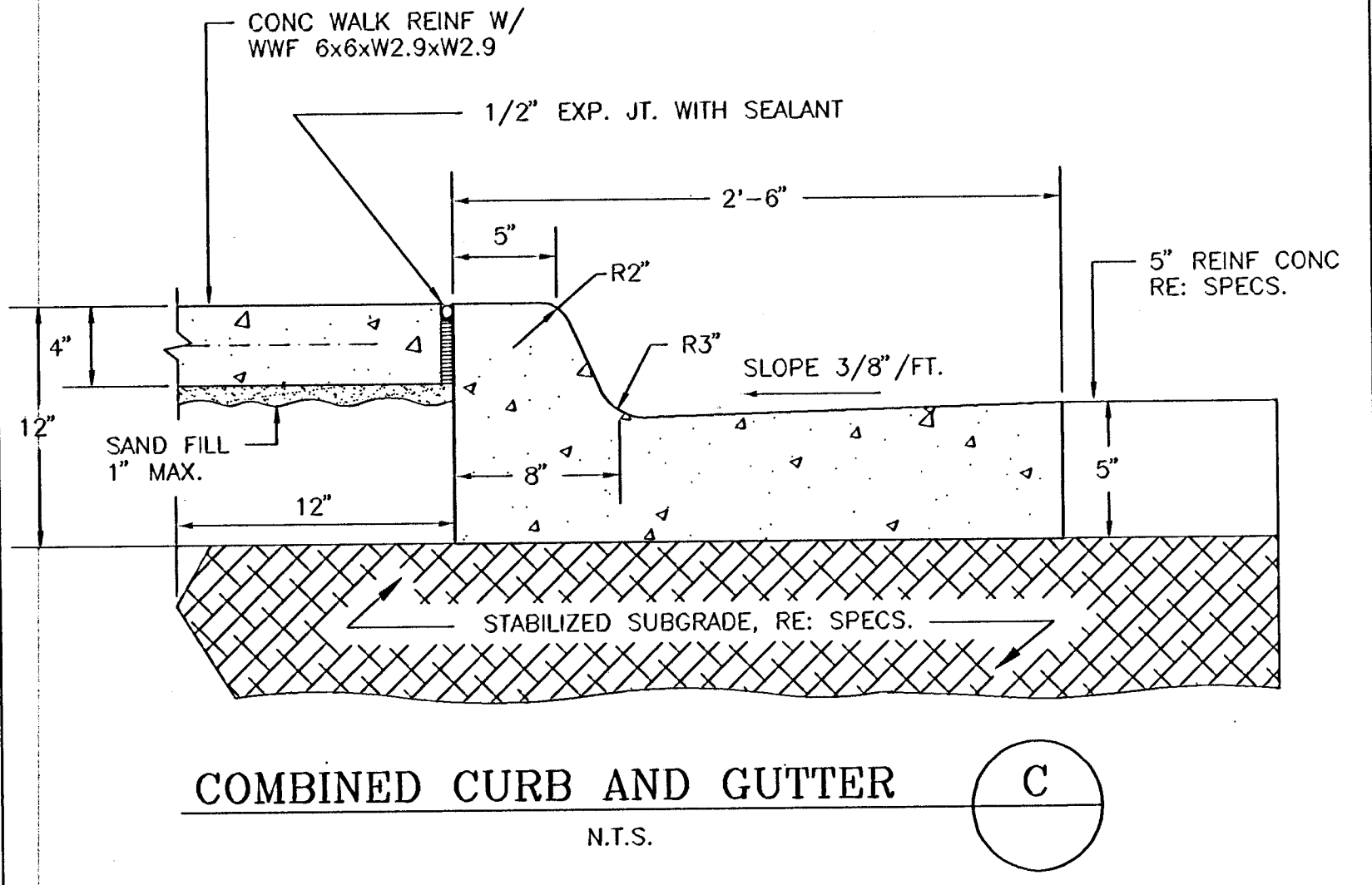
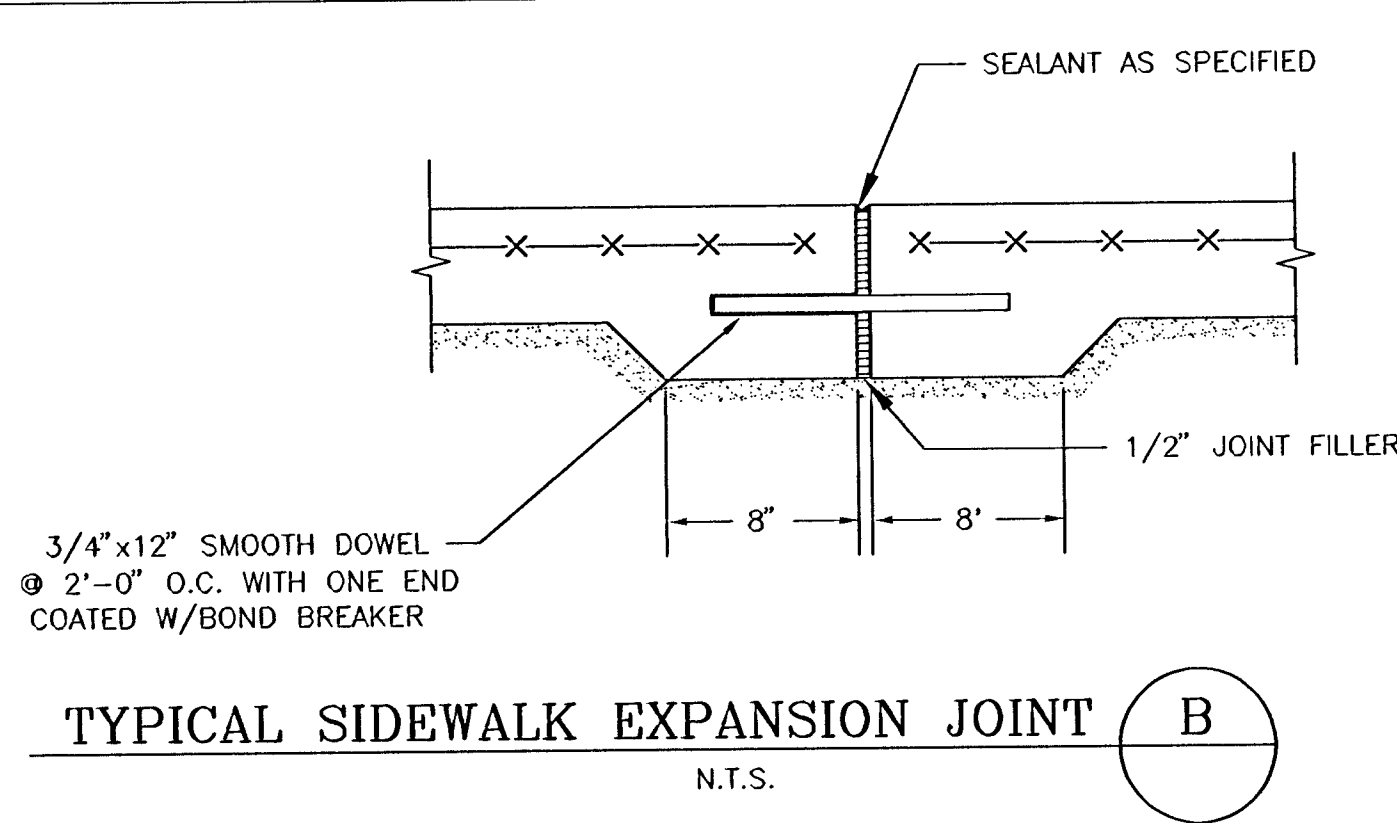
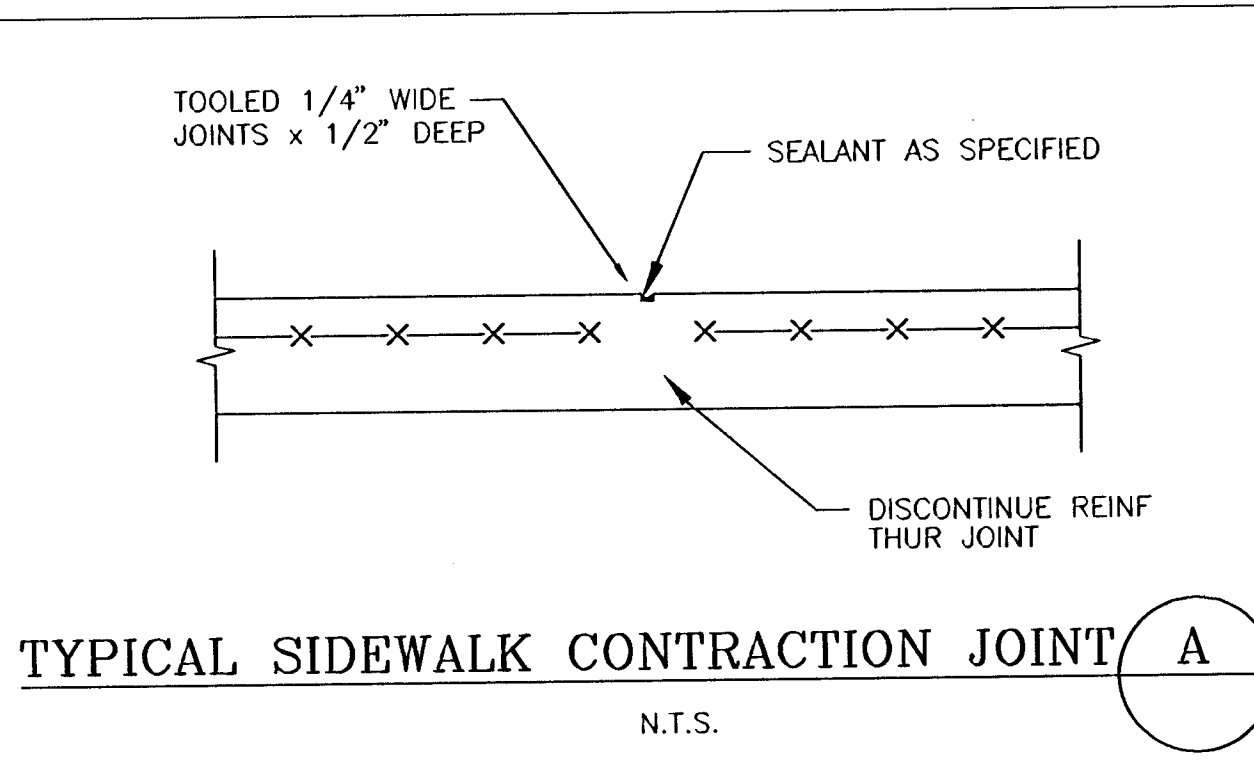
- NOTES:
1. FINISHED GRADES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS SHOWN.
 2. ALL ELEVATIONS ARE IN FEET AND REFER TO CITY OF WICHITA DATUM (WHERE CITY DATUM = USGS-1187.40)
 3. COW BENCH MARK: SW COR BRIDGE OVER LITTLE RIVER, ON CENTRAL JUST EAST OF STACKMAN DR. ELEV. 117.59

PARKING LOT on 10.6 MG RESERVOIR - GRADING PLAN
near Central Avenue and Stackman Drive
PROJECT NO.: 472-XXXX
INDEX NO.: XXXXXX

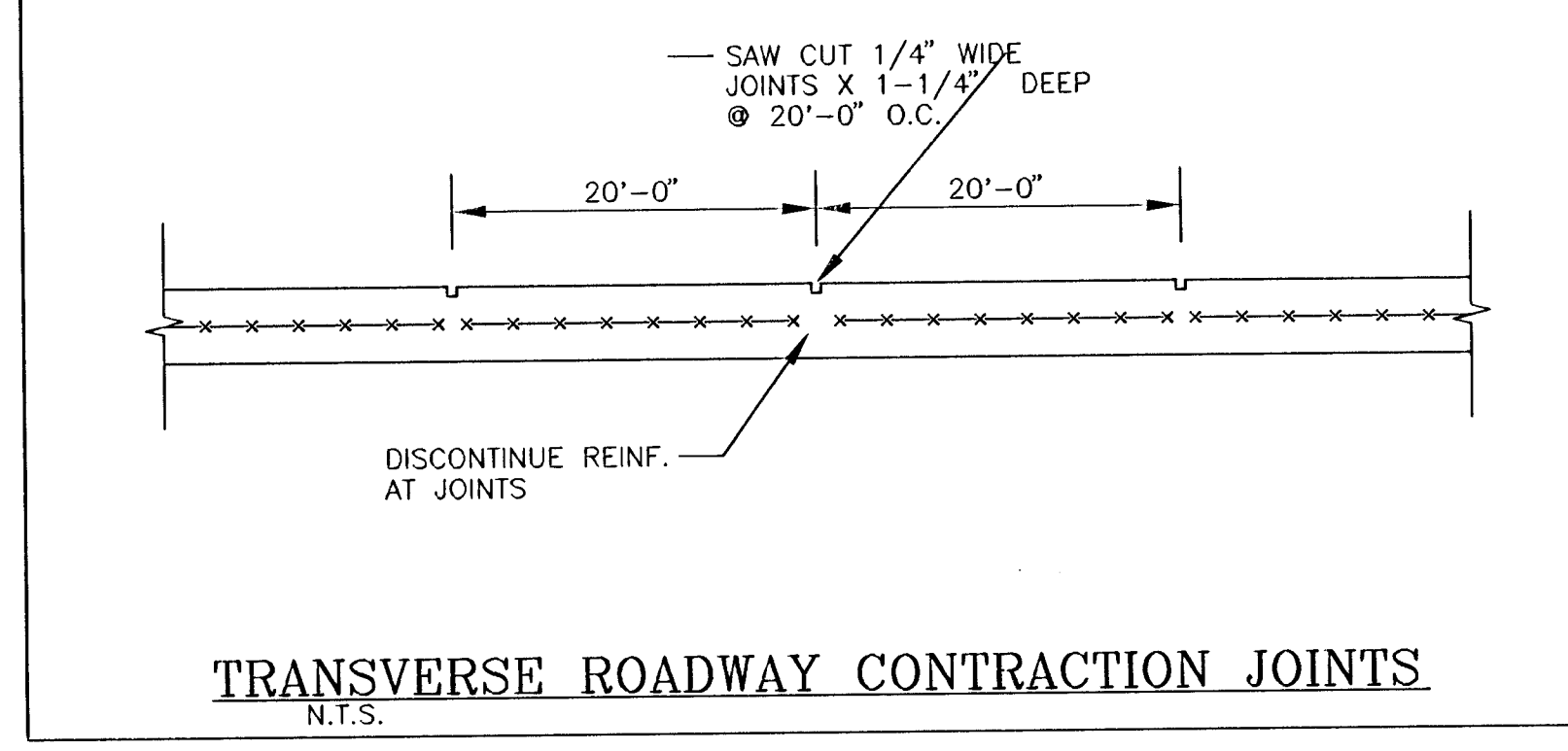
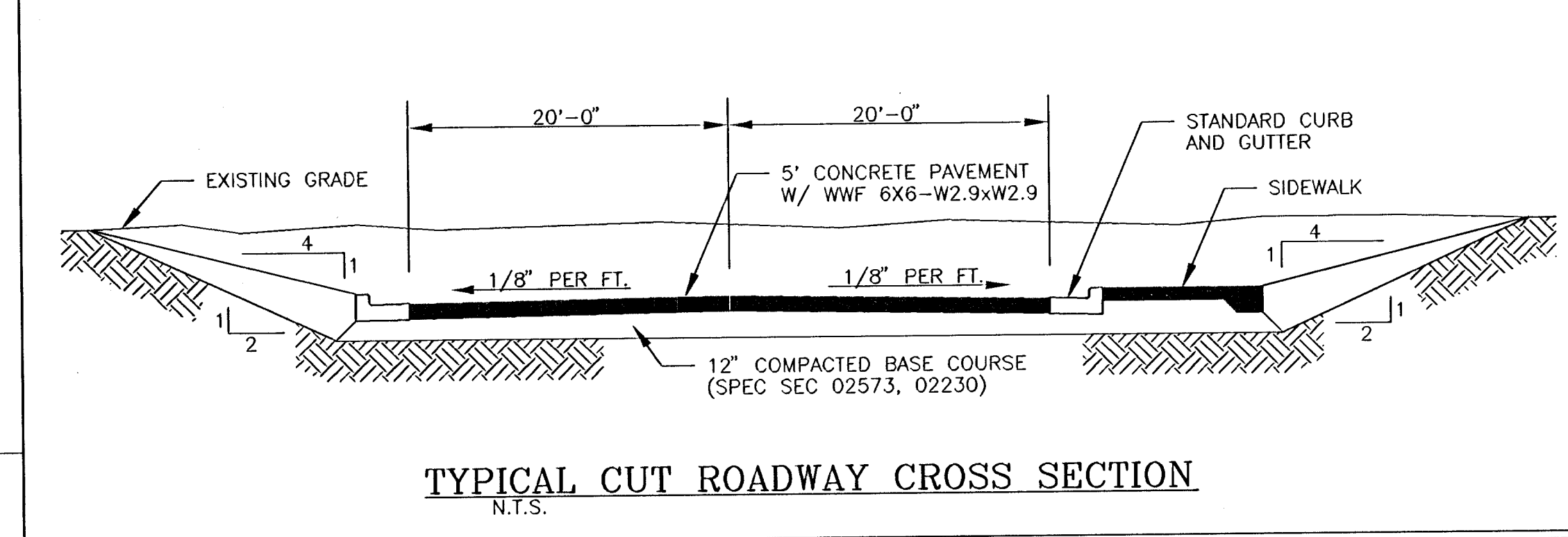
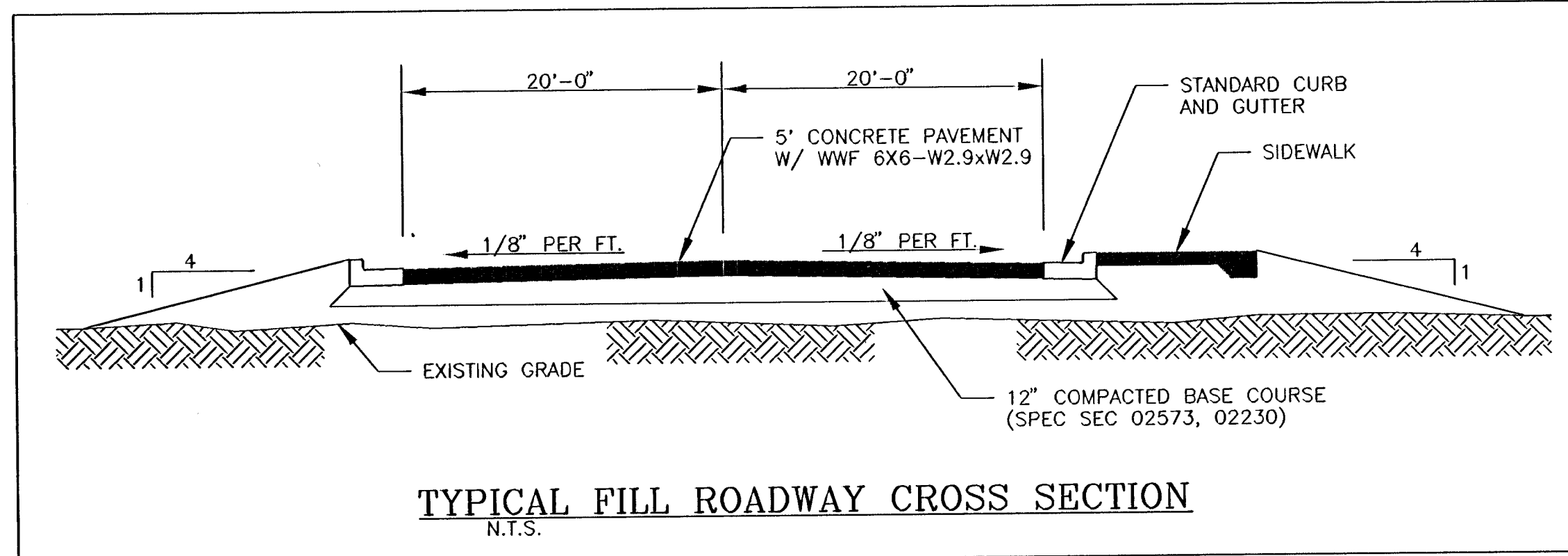
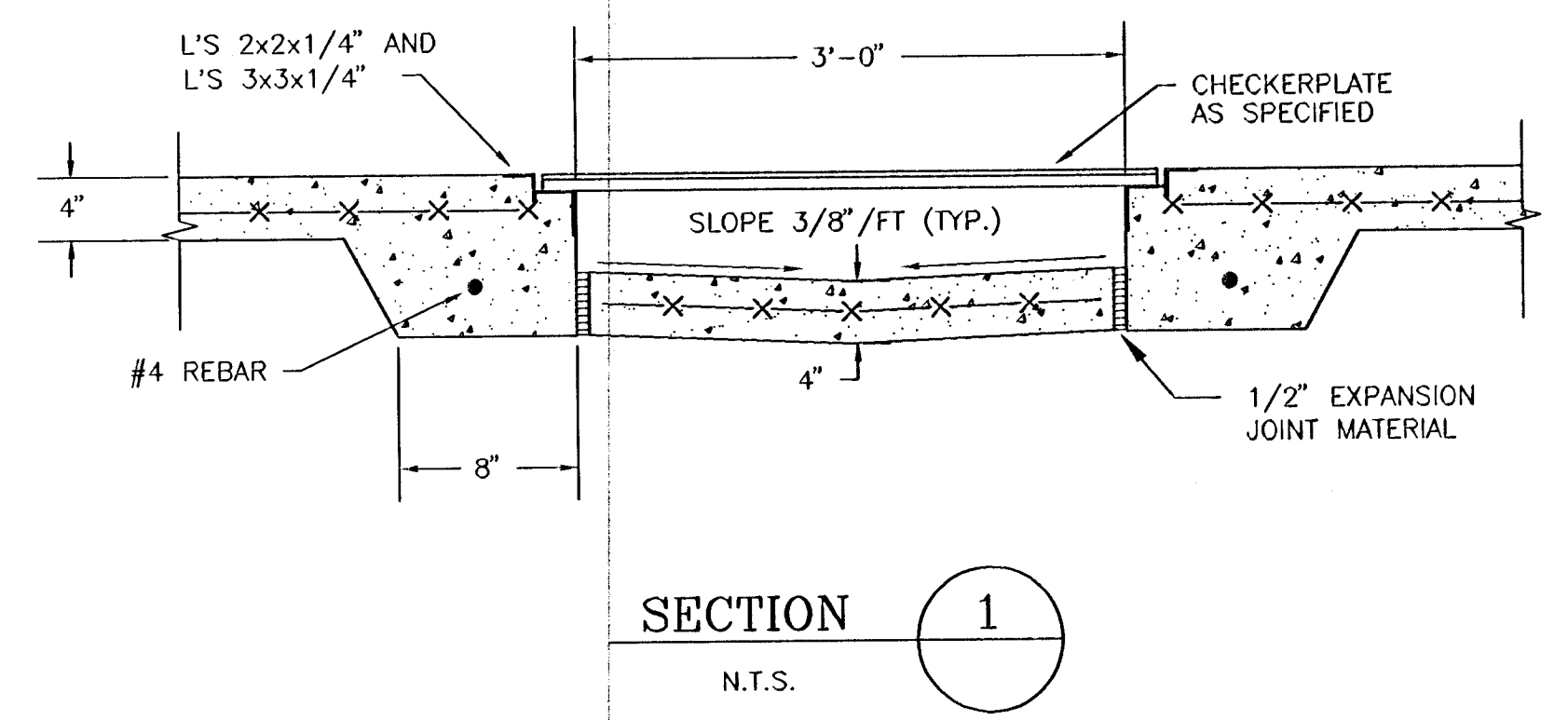
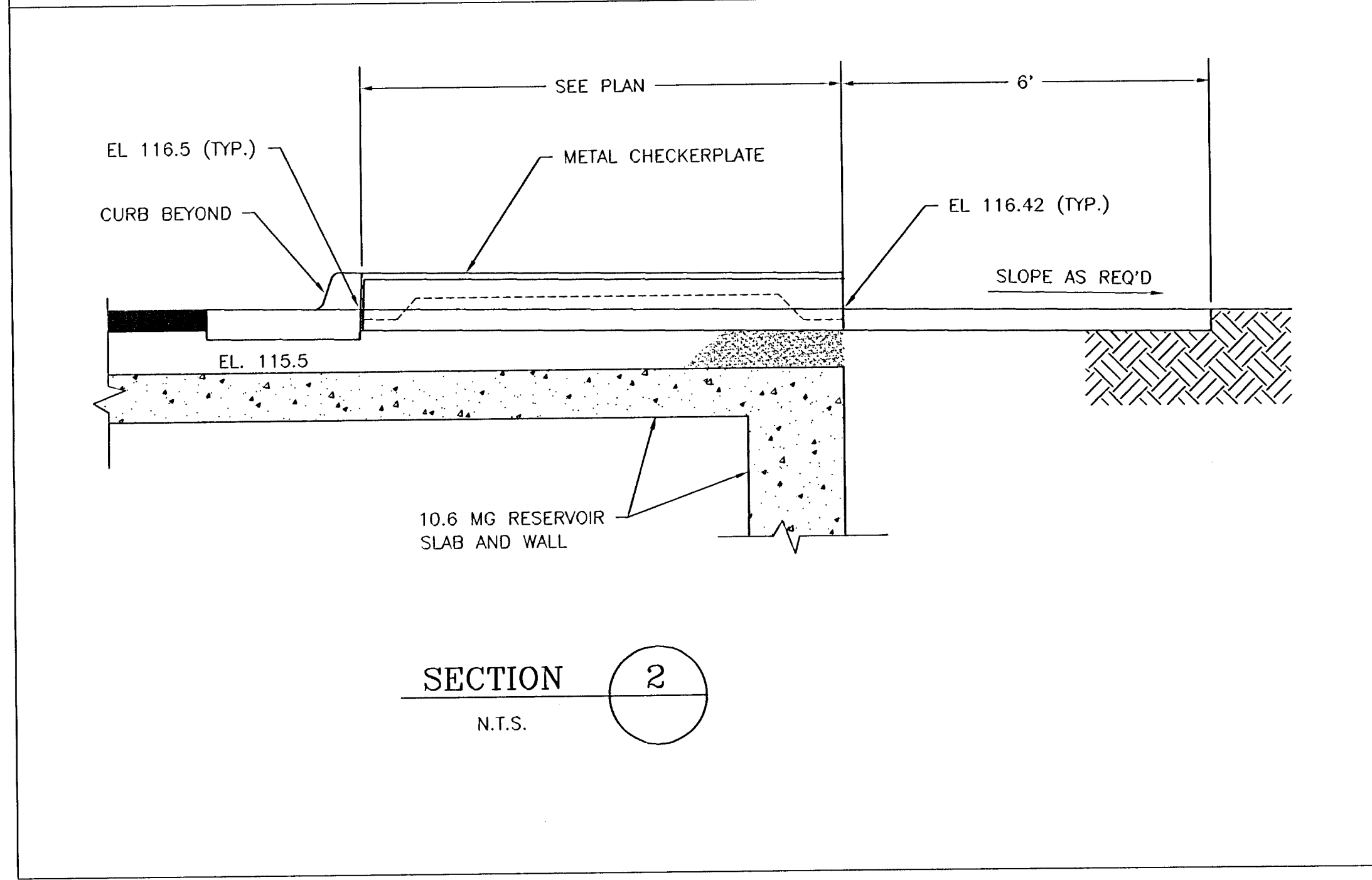
Revision	Date

CITY of WICHITA
Department of Public Works
Engineering Division - 7th Floor City Hall
455 N. Main St., Wichita, Kansas 67202
Director of Public Works - Stephen Lackey, P.E.
City Engineer - Michael E. Lindebak, P.E.

Scale:
1" = 30'
Date:
OCT 1997
Drawn By:
SAC
Approved By:
LS
SHEET NO.
G-2



SEALANT:
PECORA
Aluminum Stone Urexpam
NR-200
Urethane Sealant



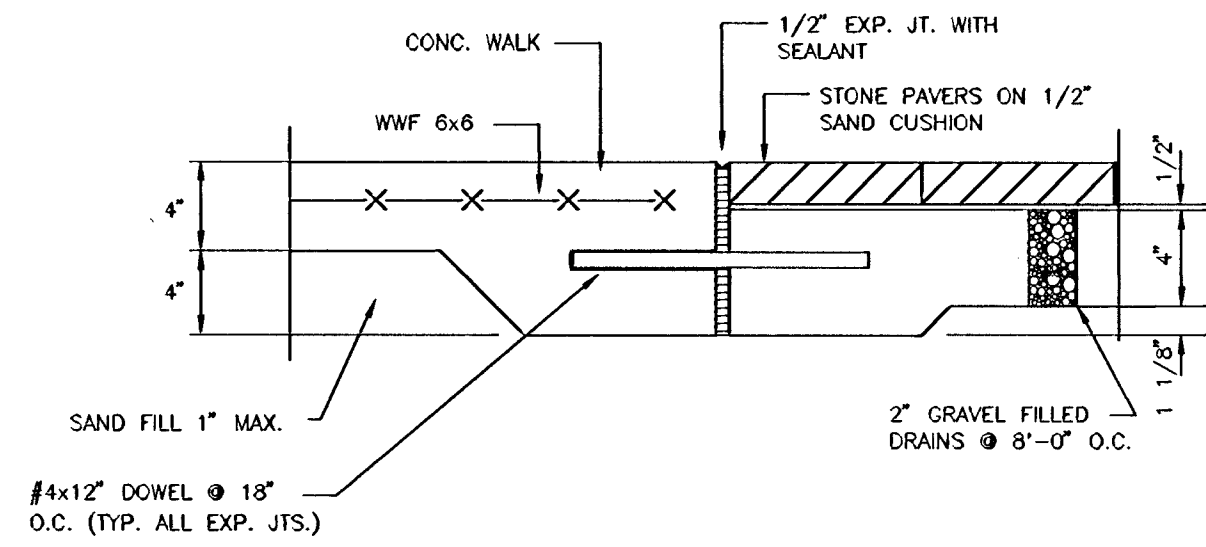
PARKING LOT on 10.6 MG RESERVOIR - DETAIL SHEET
near Central Avenue and Stackman Drive
PROJECT NO.: 472-XXXX
INDEX NO.: XXXXXX

Revision	Date

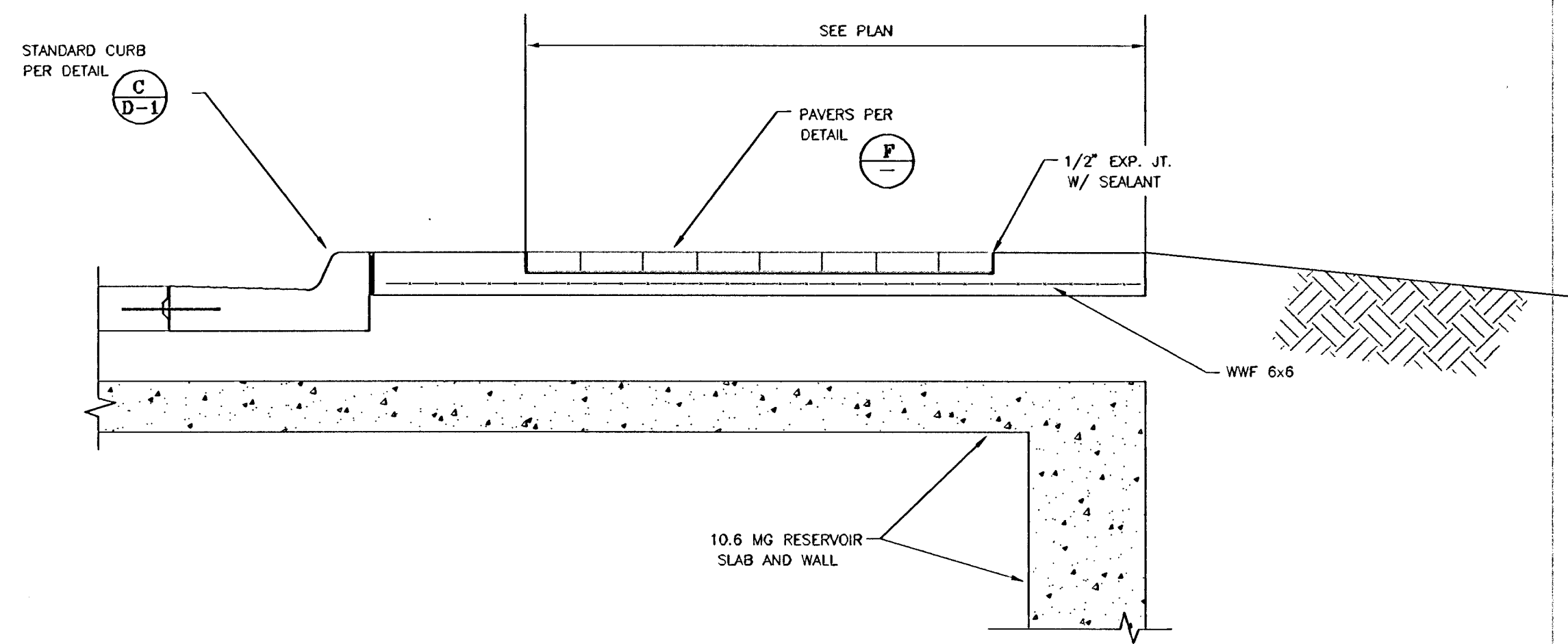
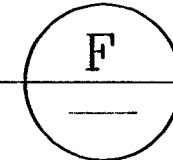
CITY of WICHITA
Department of Public Works
Engineering Division
455 N. Main St., Wichita, Kansas 67202
Director of Public Works - Stephen Lackey, P.E.
City Engineer - Michael E. Lindebak, P.E.

Scale: As Noted
Date: MAY 1997
Drawn By: SAC
Approved By: SAC
SHEET NO.

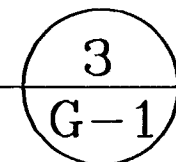
D-1



MODULAR PAVER PAVING DETAIL
N.T.S.



COMBINED CURB AND GUTTER
N.T.S.



PARKING LOT on 10.6 MG RESERVOIR - DETAIL SHEET
near Central Avenue and Stackman Drive
PROJECT NO.: 472-XXXX
INDEX NO.: XXXXXX

Revision

Date

CITY of WICHITA
Department of Public Works
Engineering Division - 7th Floor City Hall
455 N. Main St., Wichita, Kansas 67202
Director of Public Works - Stephen Locke, P.E.
City Engineer - Michael E. Lindorak, P.E.

Scale:

As Noted

Date:

MAY 1997

Drawn By:

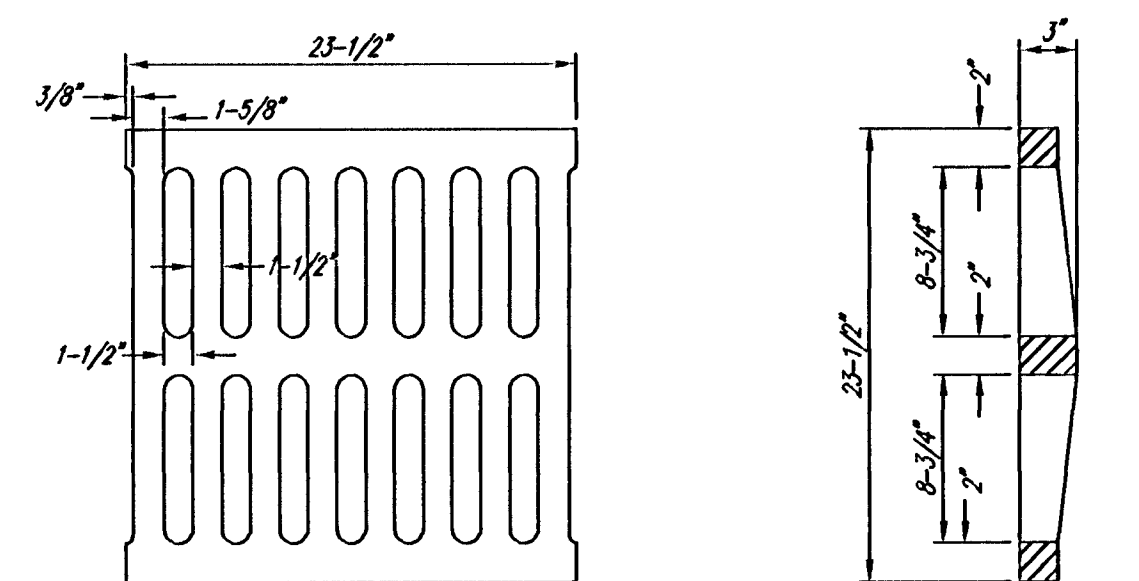
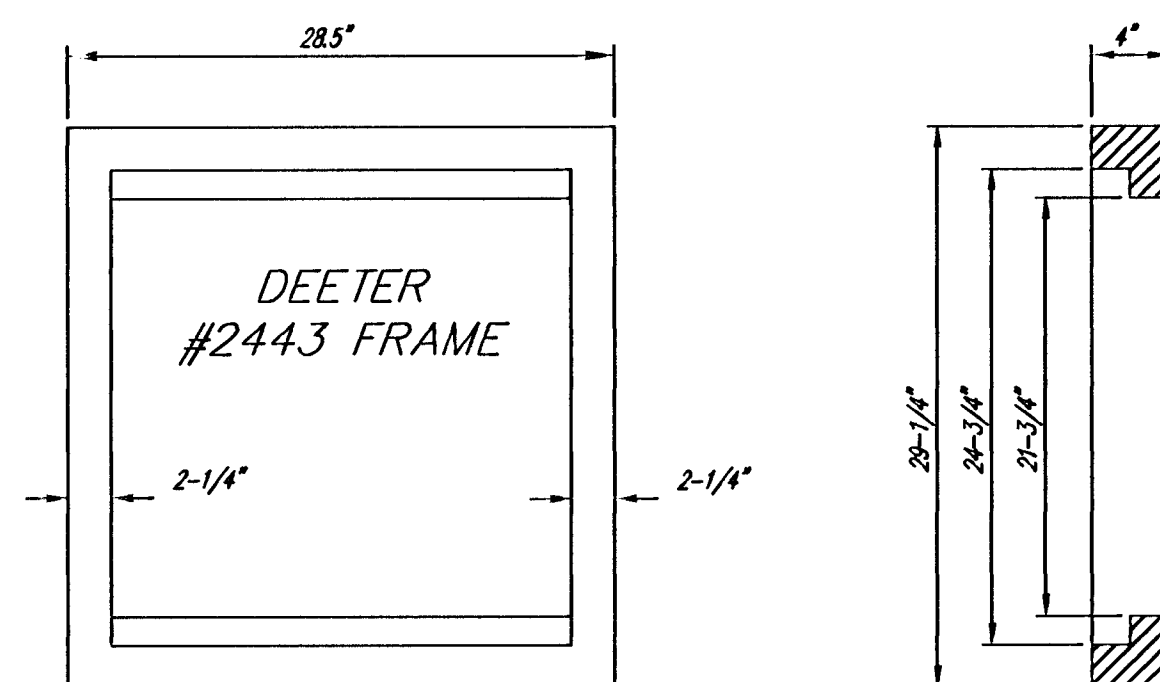
SAC

Approved By:

SAC

SHEET NO.

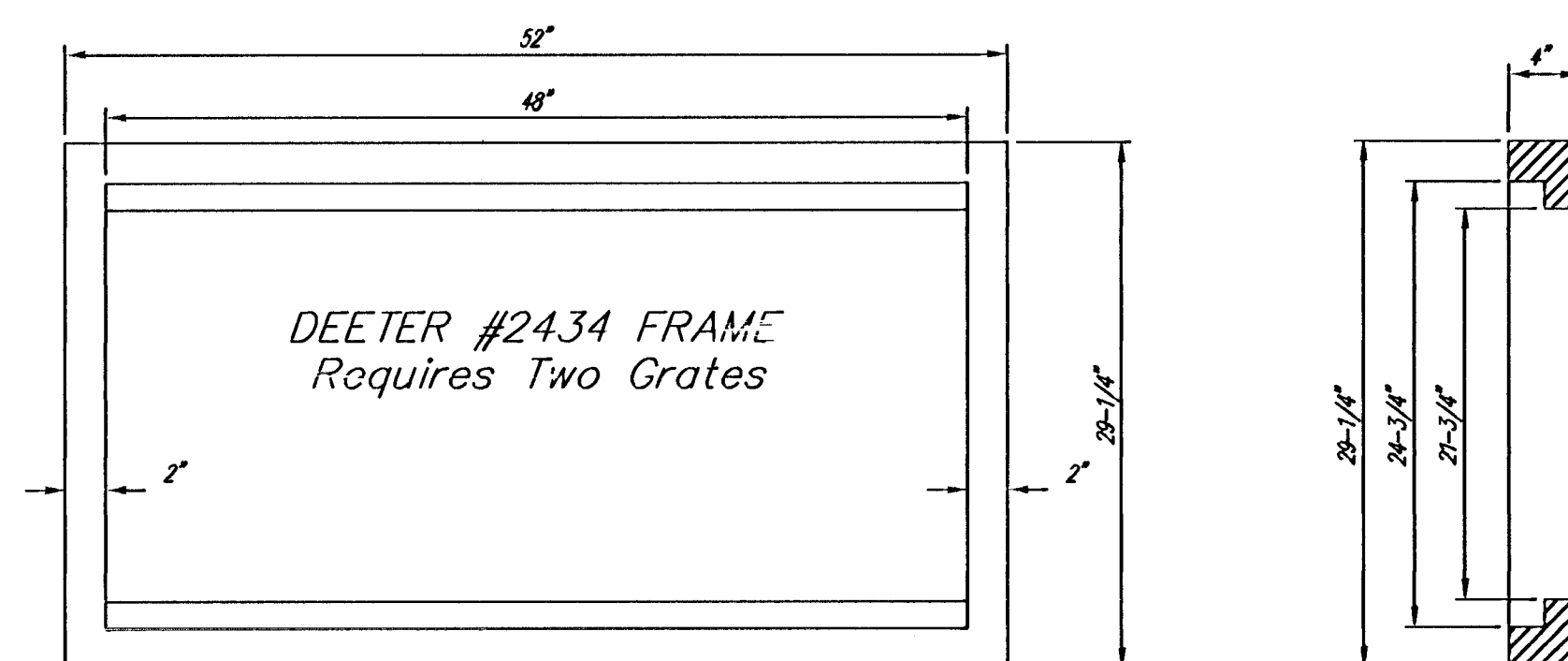
D-2



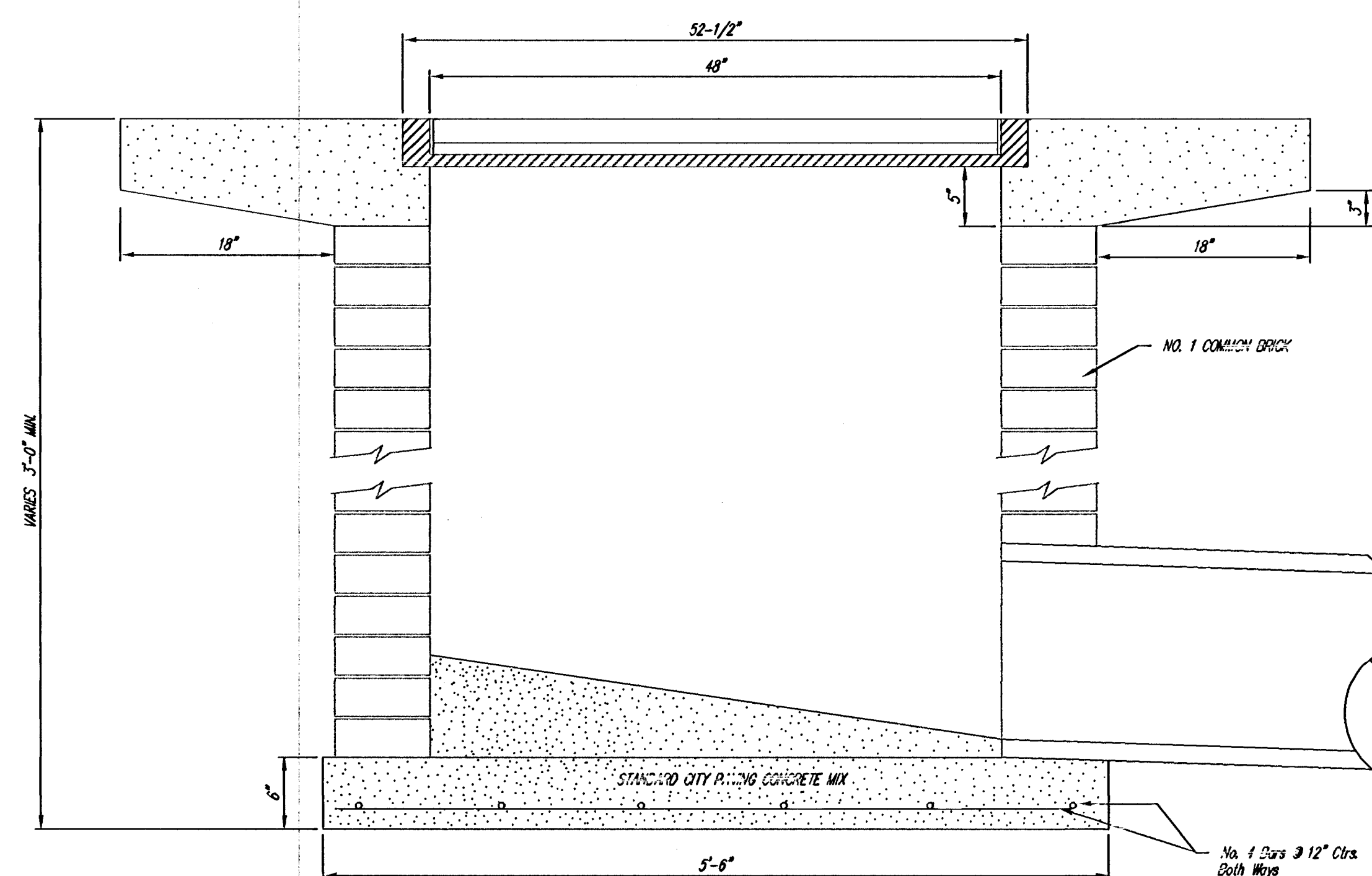
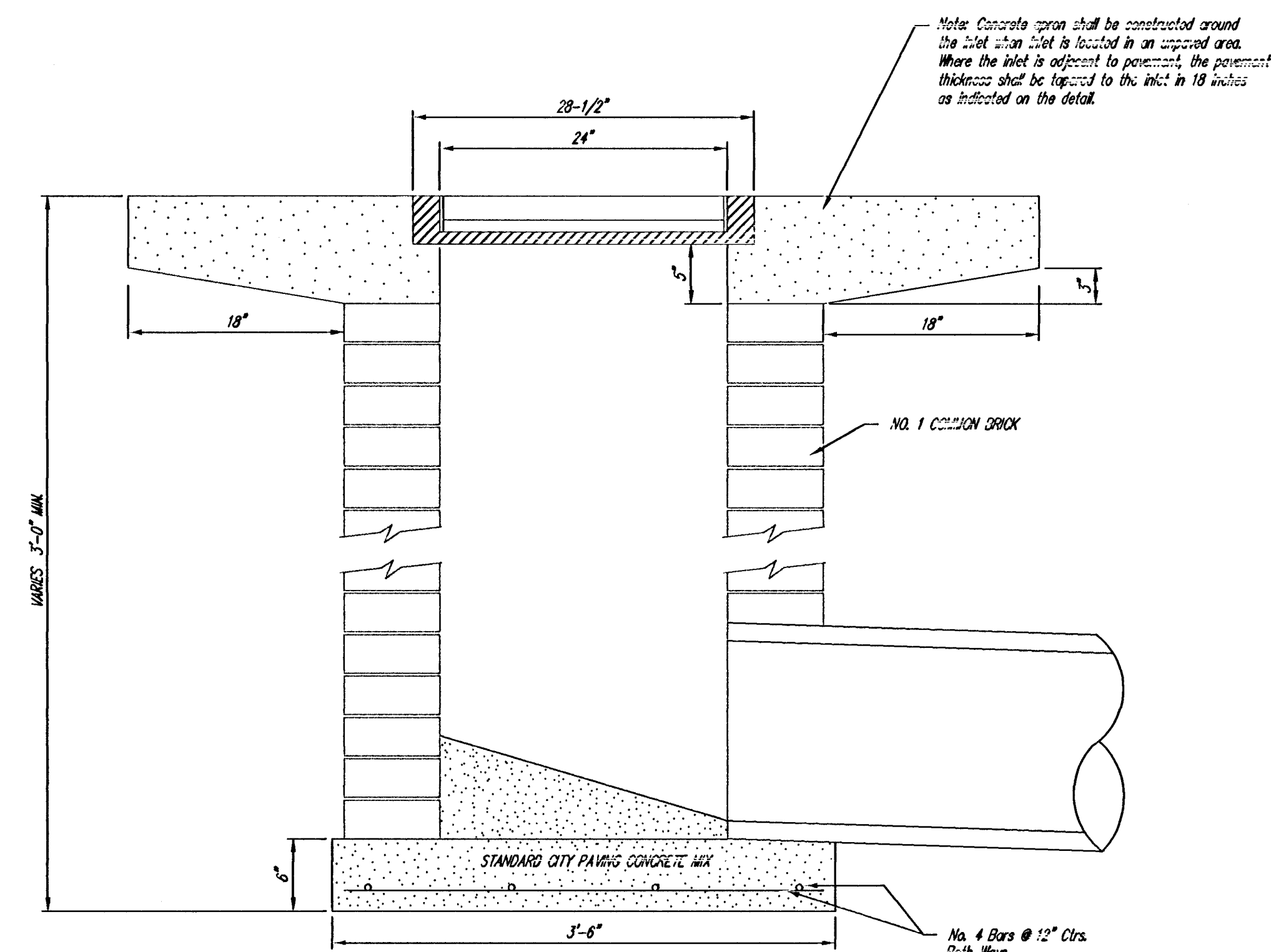
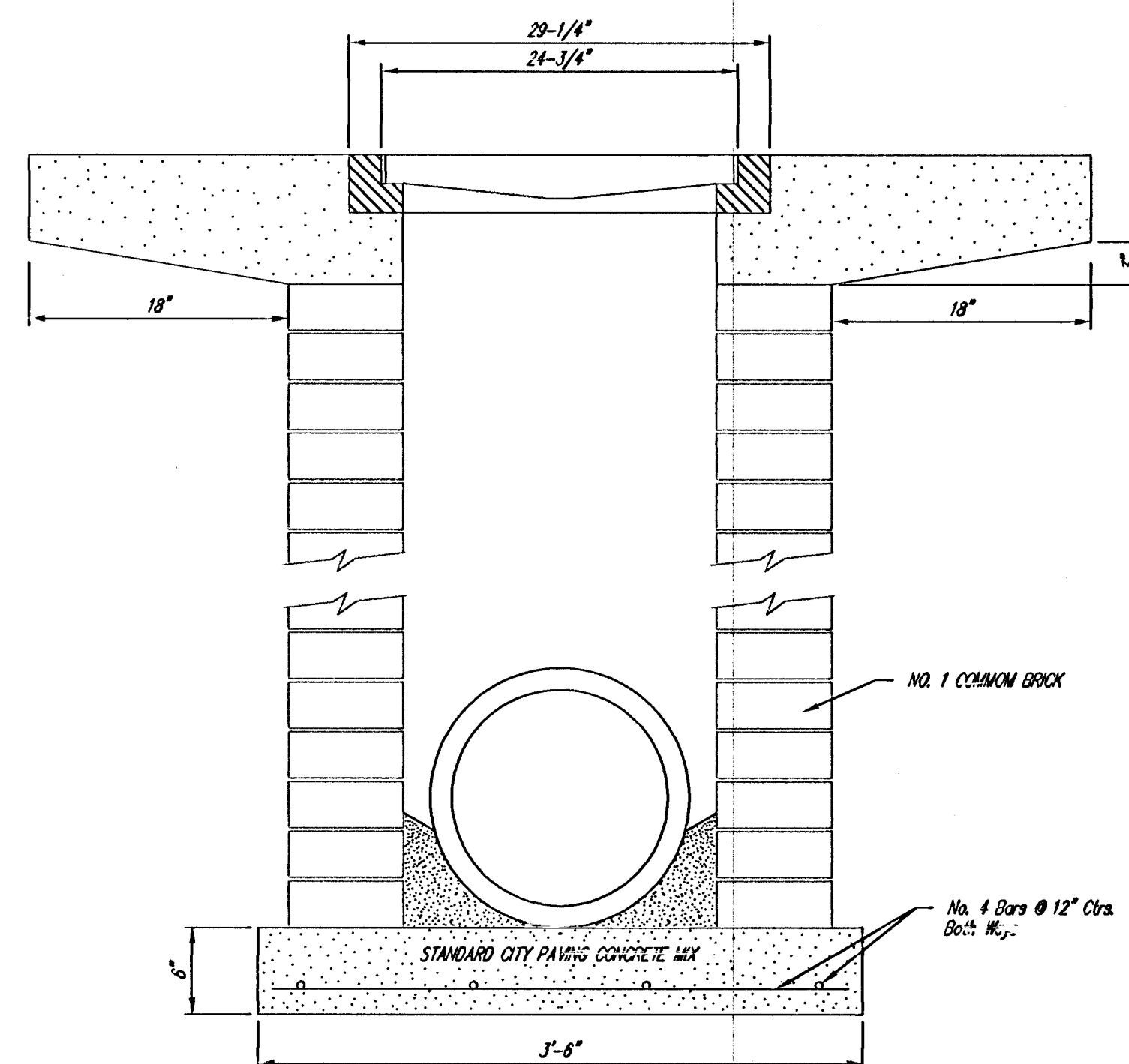
DEETER #2433 GRATE

24" x 24" Frame and Grate Detail

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 approved by the engineer.



Double 24" x 24" Frame Detail



		DROP INLET 2' X 2 1/2' X 4'	
		M. E. LINDEBAK P.E. - CITY ENGINEER	
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4551 (316) 268-4114 FAX	PROJECT NUMBER XXX-XXXX	INDEX CODE XXXXXX	DATE JUNE 97
			D-3

TRAFFIC SIGNALIZATION AT
CENTRAL AVE. AND 119TH. ST. WEST

CITY OF WICHITA
PROJECT NO. 472-84212 Ph. 5
JIM ARMOUR, P.E. - CITY ENGINEER
OCA # 706911

GENERAL NOTES

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:

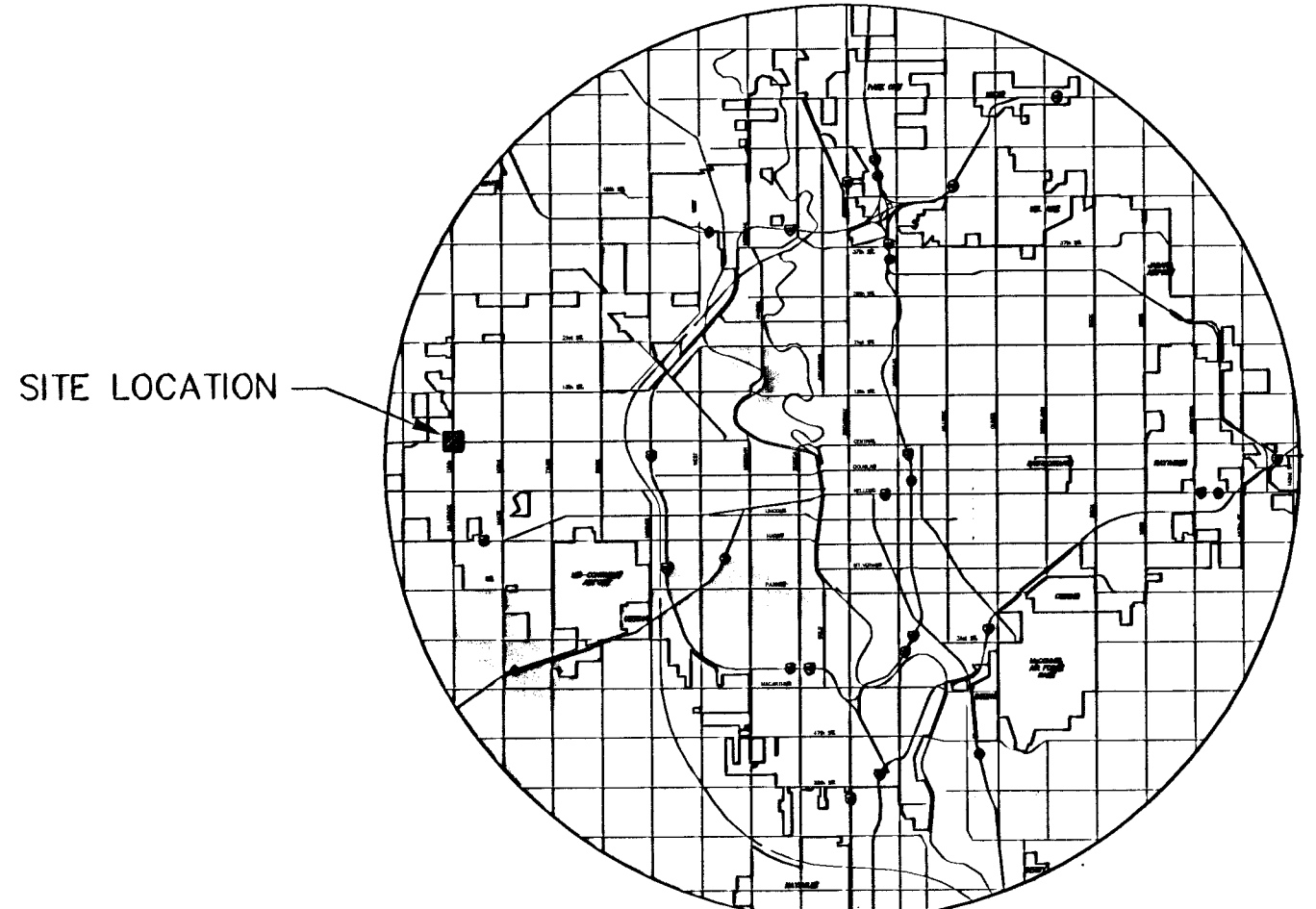
SBC (TELEPHONE)	800-870-8390
COX COMMUNICATIONS (CABLE)	262-0661
WESTAR (ELECTRIC)	383-8600
KANSAS GAS SERVICE (GAS)	832-3101
CITY OF WICHITA WATER & SEWER MAINT.	282-6000
AQUILA (GAS)	946-0096

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.

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.

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.

CONTRACTOR SHALL RESEED AND MULCH ALL DISTURBED AREAS. COST SHALL BE CONSIDERED SUBSIDIARY TO TRAFFIC SIGNAL INSTALLATION.



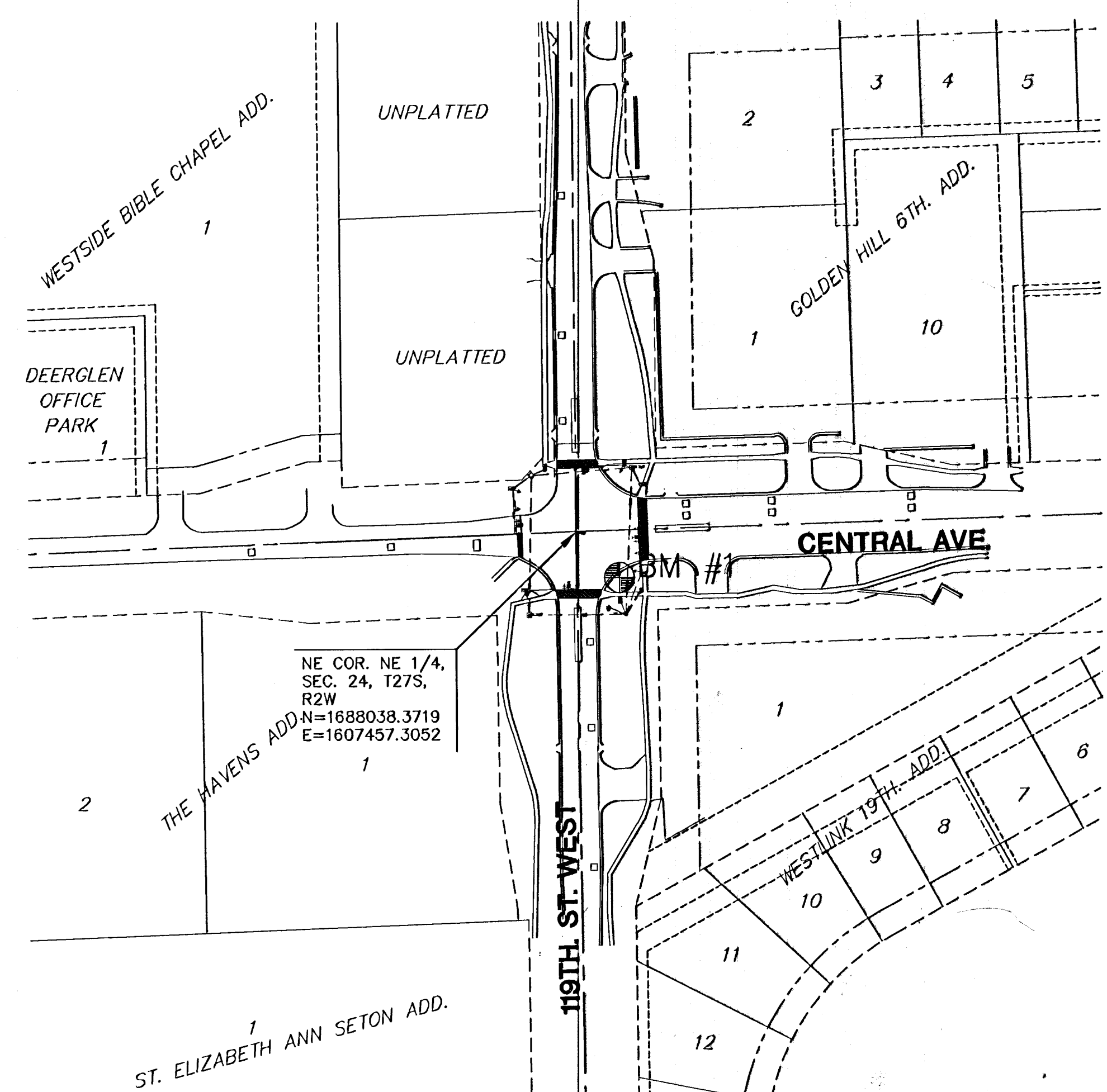
LOCATION MAP

INDEX TO DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	TEMPORARY TRAFFIC SIGNALIZATION
3	PERMANENT TRAFFIC SIGNALIZATION
4	TRAFFIC SIGNAL WIRING PLAN
5-7	TRAFFIC SIGNAL DETAILS

BENCHMARKS

BM #1 COW BENCH MARK DISC, SE CORNER OF INTERSECTION
40.00' EAST OF CENTER LINE
46.00' SOUTH OF CENTER LINE
58.82' SE OF SECTION CORNER IRON
21.70' WEST OF FACE OF WALK RUNNING N/S
13.60' NORTH OF WALK RUNNING E/W
STA. 100+38.93, 44.03' RT. ELEV.=156.98
N=1687995.5411, E=1607497.5492



SCALE: 1" = 100'



119TH. WEST AND CENTRAL INTERSECTION		
PROJECT NAME		
TITLE SHEET		
SHEET TITLE		
LAC	WNU	JRA
DESIGN BY:	DRAWN BY:	CHECKED BY:
AUGUST 2005	04238	1 / 7
DATE	JOB NO.	SHEET/OF

- Southwest Corner Sec. 18, T27S, R1W
 1. N= 1688038.37, E= 1607457.31
 2. 3/4" pipe in thimble
 3. Chiseled "X" on NE corner of traffic manhole concrete pad 86.88' SW
 4. Center of City of Wichita benchmark disc 58.53' SE
 5. Chiseled "X" on top of curb 57.50' NE
 6. Chiseled "X" on top of curb 61.90' NNW
 7. Chiseled "X" in concrete pavement 2.0' ESE, North, South, and West

GENERAL NOTES

- Conduit shall be jacked or bored under existing pavement and under new pavement that has been placed prior to conduit installation. No pavement patches allowed.
- Placement of Service/Junction Boxes, Conduit Runs and Controller are typical and may be adjusted as directed by the Engineer to facilitate installation. Contractor shall take note of future sidewalk locations.
- The Contractor shall contact utility companies which may be affected by the installation of Traffic Signalization prior to any construction.
- Westar Power Pole 119th. St. West Baseline Sta. 11+36.8, 26.2' Rt. Install Meter and Power Disconnect. See Power Pole Details.
- Contractor shall install a 1" rigid galvanized conduit from the pole located at Sta. 11+36.8, 26.2' Rt. to the traffic signal controller located at Sta. 11+36.8, 72.7' Rt., to carry the metered conductor from the meter to the traffic signal controller. Meter address is ____ N. 119th. St. West.
- Exact Video Detection Camera locations to be at the direction of the Manufacturer's Representative. Video Camera cable terminations, camera fine tuning, system setup, and programming will be performed by the supplier with the assistance of the contractor.
- See Signal Pole Details for additional Traffic Signal Structures requirement.
- Contractor shall cover and inactivate Signal No. 9, 16a and 16b. See Traffic Signal Wiring Plan for signal locations.
- Utility lines in conflict with proposed signal poles and mast arms will be relocated by the utility company prior to construction.

Remove brush and fence as required to install signal.

Pedestrian Signal to be provided by Contractor but installed by others.

Pedestrian Signal to be provided by Contractor but installed by others.

Construct Temporary Asphalt Sidewalk

Signs to be covered by Contractor.

Protect tree from damage

- PT. 103 5/8" bar with red MKEC Design Point cap
 1. N = 1687975.50 E = 1607392.98
 2. 60' South of traveled way of Central.
 3. 65' West of traveled way of 119th Street West.

LEGEND

- Steel Traffic Signal Pole (Joint use)
- Steel Traffic Signal Pole (Std. Pole)
- Pedestal Pole (10' Aluminum)
- Traffic Signal Indication (Type A) w/Backplate
- Mast Arm Suspended Traffic Signal
- Video Detection Camera
- Service Box
- Controller
- Pedestrian Indication
- Junction Box
- Vehicle Detection Zone
- Detector Number
- Rigid Galvanized Conduit (RGC)
- PVC Conduit
- Existing Meter Box and Power Disconnect
- Overhead Street Name Sign
- Overhead Sign R10-10 (Lt. Turn Signal)
- Wind Damper
- Existing Power Pole
- Existing Service Box

CENTRAL

SIGNAL PHASING

119TH. ST. WEST

CENTRAL AVE.

103+00

Scale: 1"=20'

TYPE 170 CONTROLLER SETTINGS

INTERVAL	WAPITI PROGRAM PHASE								NORMAL DISPLAY FEATURES							
	1	2	3	4	5	6	7	8	TIME CLOCK	FEATURES						
MAX	0	80	30	80	80	80	30	80	0 YEAR	VEH RECALL						
MAX 2	1	80	30	80	80	80	30	80	1 MONTH	PED RECALL						
WALK	2	8	0	8	8	8	0	8	2 DAY/MONTH	RED LOCK						
FL. DW.	3	30	0	30	30	0	30	3 DAY/WEEK	YEL LOCK							
MAX INIT.	4	10	6	10	10	6	10	4 HOUR	Ø PERMIT							
MIN GREEN	5	8	5	8	8	5	8	5 MINUTE	PED PHASES							
TBR	6	15	1	15	15	1	15	6 SECOND	LEAD PHASES							
TTR	7	25	1	25	25	1	25	7	DBL ENTRY							
PASSAGE	8								SEQUENTIAL							
MIN GAP	9	2.0	1.0	2.0	2.0	1.0	2.0	9	START UP YEL							
ADD ACT	a	1.0	1.0	1.0	1.0	1.0	1.0	a	OVERLAP A							
YELLOW	b	2.5	1.0	2.5	2.5	1.0	2.5	b	OVERLAP B							
RED CLR.	c	4.0	3.0	4.0	4.0	3.0	4.0	c	OVERLAP C							
RED REV.	d	1.5	1.0	1.5	1.5	1.0	1.5	d	OVERLAP D							
WALK II	e	0	0	0	0	0	0	e	EXCLUSIVE							
	f	0	0	0	0	0	0	f	SIM GAP							

LTT-2

J:\Civil\04238\dwg\signals\04238sgl.dwg 8/10/2005 10:42:39 AM CST

DETECTION ZONES			
CAMERA NO.	ZONE NO.	SIZES (W x L)	MOVEMENT CALLED
1	5	8 x 50	6
1	6a, 6b	6 x 6	6
1	7a, 7b	6 x 6	6
1	8a, 8b	6 x 6	6
2	9	8 x 50	7
2	10	6 x 6	4
2	11	6 x 6	4
2	12	6 x 6	4
3	13	10 x 6	5
3	14	6 x 6	2
3	15	6 x 6	2
4	1	8 x 50	3
4	2	6 x 6	8
4	3	6 x 6	8
4	4	6 x 6	8



119TH. WEST AND CENTRAL INTERSECTION
 PROJECT NAME

TEMPORARY TRAFFIC SIGNAL PLAN
 SHEET TITLE

LAC DESIGN BY: WNU DRAWN BY: JRA CHECKED BY:
 JANUARY 2005 04238 JOB NO. 2 / 7 SHEET/OF

GENERAL NOTES

- Exact Video Detection Camera locations to be at the direction of the Manufacturer's Representative. Video Camera cable terminations, camera fine tuning, system setup, and programming will be performed by the supplier with the assistance of the contractor.
- Contractor shall uncover and activate Signal No. 9, 16a and 16b. See Traffic Signal Wiring Plan for signal locations.
- The signal timing changes, detection zone changes, and additional signal activations necessary for the permanent traffic signal plan are not included in this contract. These items are being shown for information only. The signal equipment provided in the contract shall be capable of supporting the future signal plan without requiring additional equipment or materials.

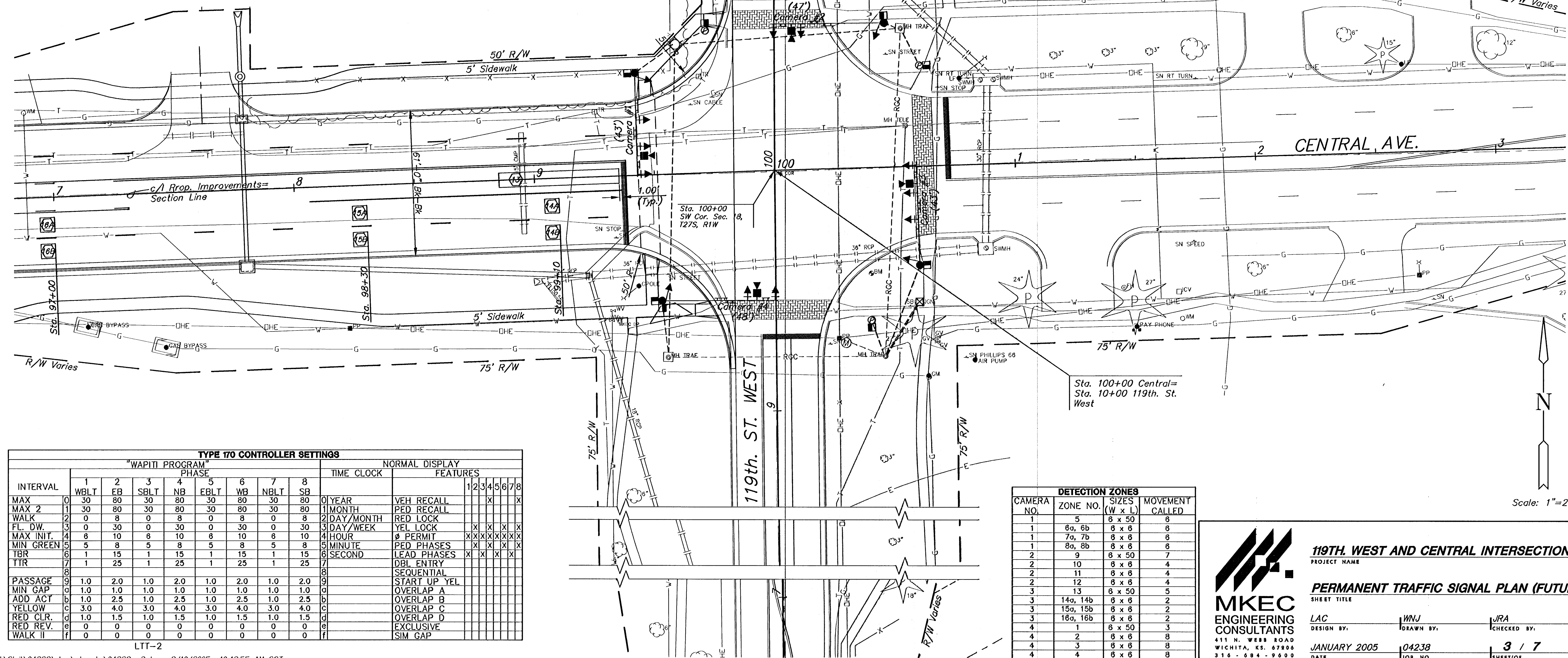
LEGEND

- Steel Traffic Signal Pole (Joint use)
- Steel Traffic Signal Pole (Std. Pole)
- ⊙ Pedestal Pole (10' Aluminum)
- Traffic Signal Indication (Type A) w/Backplate
- ⬆ Mast Arm Suspended Traffic Signal
- Video Detection Camera
- Service Box
- ⊠ Controller
- ⬆ Pedestrian Indication
- Junction Box
- ▭ Vehicle Detection Zone
- ① Detector Number
- Rigid Galvanized Conduit (RGC)
- PVC Conduit
- Ⓜ Existing Meter Box and Power Disconnect
- ⊢ Overhead Street Name Sign
- ⊢ Overhead Sign R10-10 (Lt. Turn Signal)
- ⊢ Wind Damper
- Ⓜ Existing Power Pole
- Ⓜ Existing Service Box

CENTRAL

119TH. ST. WEST

SIGNAL PHASING



Sta. 100+00 Central= Sta. 10+00 119th. St. West

Scale: 1"=20'

TYPE 170 CONTROLLER SETTINGS

INTERVAL	"WAPITI PROGRAM" PHASE								NORMAL DISPLAY FEATURES							
	WBLT	EB	SBLT	NB	EBLT	WB	NBLT	SB	TIME CLOCK	FEATURES						
MAX	0	30	80	30	80	30	80	30	0	YEAR	VEH RECALL					
MAX 2	1	30	80	30	80	30	80	30	1	MONTH	PED RECALL					
WALK	2	0	8	0	8	0	8	0	2	DAY/MONTH	RED LOCK					
FL. DW.	3	0	30	0	30	0	30	0	3	DAY/WEEK	YEL LOCK					
MAX INIT.	4	8	10	8	10	8	10	8	4	HOURLY	PERMIT	X	X	X	X	X
MIN GREEN	5	5	8	5	8	5	8	5	5	MINUTE	PED PHASES	X	X	X	X	X
TBR	6	1	15	1	15	1	15	1	6	SECOND	LEAD PHASES	X	X	X	X	X
TTR	7	1	25	1	25	1	25	1	7		DBL ENTRY					
PASSAGE	8	1.0	2.0	1.0	2.0	1.0	2.0	1.0	8		SEQUENTIAL					
MIN GAP	a	1.0	1.0	1.0	1.0	1.0	1.0	1.0	a		START UP YEL					
ADD ACT	b	1.0	2.5	1.0	2.5	1.0	2.5	1.0	b		OVERLAP A					
YELLOW	c	3.0	4.0	3.0	4.0	3.0	4.0	3.0	c		OVERLAP B					
RED CLR.	d	1.0	1.5	1.0	1.5	1.0	1.5	1.0	d		OVERLAP C					
RED REV.	e	0	0	0	0	0	0	0	e		OVERLAP D					
WALK II	f	0	0	0	0	0	0	0	f		EXCLUSIVE					
											SIM GAP					

LTT-2

DETECTION ZONES			
CAMERA NO.	ZONE NO.	SIZES (W x L)	MOVEMENT CALLED
1	5	6 x 50	8
1	6a, 6b	6 x 6	8
1	7a, 7b	6 x 6	8
1	8a, 8b	6 x 6	8
2	9	6 x 50	7
2	10	6 x 6	4
2	11	6 x 6	4
2	12	6 x 6	4
3	13	6 x 50	5
3	14a, 14b	6 x 6	2
3	15a, 15b	6 x 6	2
3	16a, 16b	6 x 6	2
4	1	6 x 50	3
4	2	6 x 6	8
4	3	6 x 6	8
4	4	6 x 6	8



119TH. WEST AND CENTRAL INTERSECTION
PROJECT NAME

PERMANENT TRAFFIC SIGNAL PLAN (FUTURE)
SHEET TITLE

LAC DESIGN BY. WNJ DRAWN BY. JRA CHECKED BY.
JANUARY 2005 04238 3 / 7
DATE JOB NO. SHEET/OF

BILL OF MATERIALS (for Information Only)		
ITEM	UNIT	QUANTITY
Traffic Signal Pole Steel w/Mastarm (Joint Use)	Each	-
Traffic Signal Pole Steel w/Mastarm (Std)	Each	4
Traffic Signal Pedestal Pole Aluminum (10')	Each	3
Concrete Controller Pad	Each	1
Concrete Footing - Pole	Each	4
Concrete Footing - Pedestal Pole	Each	3
Service Box - 36 In. Dia.	Each	1
Junction Box - 24 In. Dia. (includes Interconnect)	Each	?
Ground Rod & Clamp	Each	6
Conduit Clamp	Each	As Needed
Pedestrian Signal Lamp L.E.D. (12" Combination)	Each	4
L.E.D. Unit	Each	50
Back Plate For Signal Head (Type A)	Each	6
Back Plate For Signal Head (Type I)	Each	4
Entrance Head	Each	1
Circuit Breaker & Box	Each	1
Traffic Signal Head - 12" (Type A) w/Mounting Bracket	Each	10
Traffic Signal Head - 12" (Type I) w/Mounting Bracket	Each	4
Pedestrian Signal - 12" (Type K) w/Mounting Bracket	Each	8
Pedestrian Pushbutton w/Sign	Each	8
Pad Mounted Cabinet & Controller System-Type 170 (See Note)	Each	1
Lead-In Wire No. 6 Awg 1/c (Type THHN)	Lin. Ft.	59
Multi-Conductor Cable No. 14 Awg 2/c	Lin. Ft.	30
Multi-Conductor Cable No. 14 Awg 5/c	Lin. Ft.	430
Multi-Conductor Cable No. 14 Awg 7/c	Lin. Ft.	1667
Standard No. 8 Awg 1/c (Type THHN)(Ground)	Lin. Ft.	1,000
1" Pvc	Lin. Ft.	-
2" Pvc	Lin. Ft.	-
Rigid Galvanized Conduit 1"	Lin. Ft.	-
Rigid Galvanized Conduit 2"	Lin. Ft.	160
Rigid Galvanized Conduit 3"	Lin. Ft.	285
Video Detection Camera And Mounting Hardware (Riser Brackets)	Each	4
Video Detection Processor Unit (Iteris Vantage Or Apr'vd Equal)	Each	1
Video Power Cable No. 16 Awg 3/c	Lin. Ft.	710
Video Cable 75 ohm Coaxial (Belden #8281)	Lin. Ft.	710
Tv Monitor	Each	1
Video System Programming Unit	Each	1
Street Name Signs	Each	4
Left Turn Yield On Green w/Mounting Hardware (R10-12)	Each	4

Type 170 Traffic Controller System to include:

One (1) model 170 controller unit complete with 412b2 system memory module capable of supporting Wapiti Micro System W4IKS (56a or latest revision) traffic program on 27256 eeprom.

One (1) model 332 cabinet complete with all accessories including four (4) model 430 transfer relays, two (2) model 204 flasher units and one (1) model 210pc (ecl or ms) conflict monitor.

Three (3) model 242 two channel isolators.

Twelve (12) model 200 switch packs.

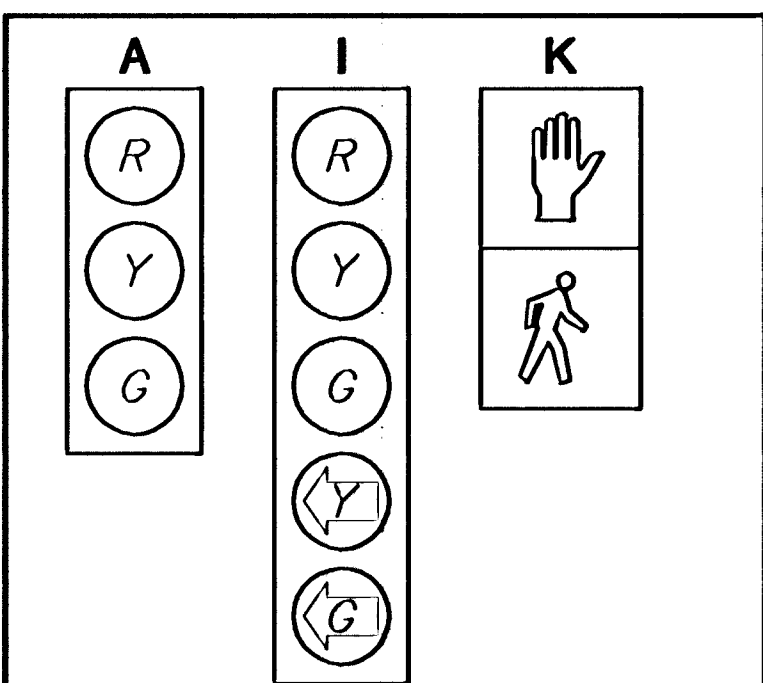
One (1) surge protector.

Note: The contractor shall supply and install all necessary material and equipment for the complete installation and operation of the Traffic Signal whether specifically mentioned or not.

TRAFFIC SIGNAL HEAD SUMMARY				
SIGNAL NO.	TYPE	SIZE	MOUNTING BRACKET	QUANTITY
1	I	5-12"	TYPE I	1
2	A	3-12"	TYPE I	2
3	A	3-12"	TYPE III	1
4a, 4b	K	2-12"	TYPE II	2
5	I	5-12"	TYPE I	1
6	A	3-12"	TYPE I	1
7	A	3-12"	TYPE III	1
8a, 8b	K	2-12"	TYPE II	2
9	I	5-12"	TYPE I	1
10	A	3-12"	TYPE I	2
11	A	3-12"	TYPE III	1
12a, 12b	K	2-12"	TYPE II	2
13	I	5-12"	TYPE I	1
14	A	3-12"	TYPE I	1
15	A	3-12"	TYPE III	1
16a, 16b	K	2-12"	TYPE II	2

ALL SIGNAL HEADS TO BE L.E.D.

J:\CIVIL\04238\dwg\signals\04238wr1.dwg 8/10/2005 10:44:52 AM CST



SIGNAL FACE ARRANGEMENT

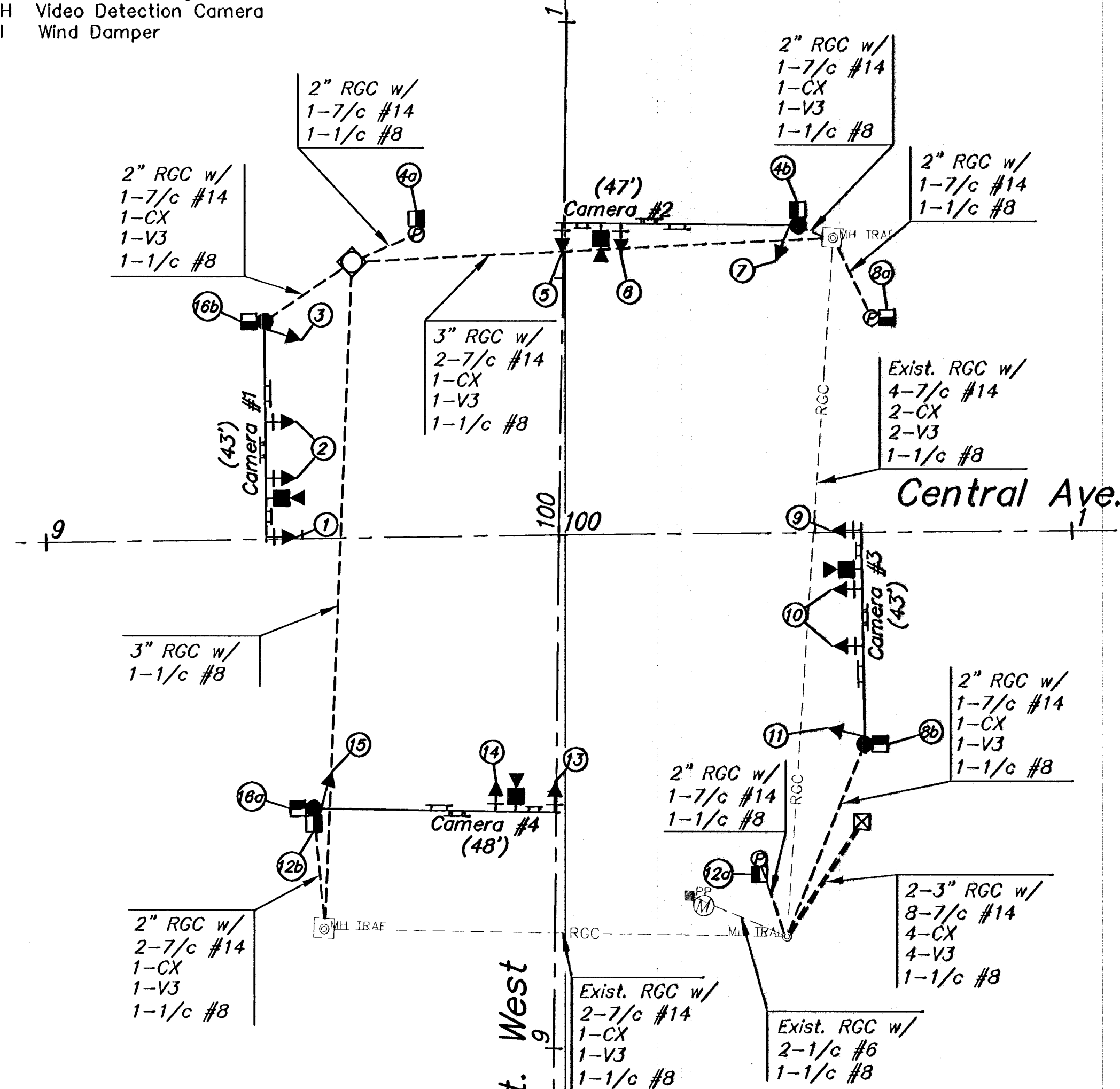
All lenses in each head shall be L.E.D. unit per note.

TRAFFIC SIGNAL POLE SUMMARY						
STATION	TYPE	ARM LENGTH	SIGNALS ON ARM	X1	X2	OTHER EQUIP. ON ARM
99+51.3, Rt.	B	48'	2-E	11.5	-	1-D, 1-G, 1-H, 1-I
99+43.3, Lt.	B	43'	3-E	11.5	11	1-D, 1-G, 1-H, 1-I
99+73.2, Lt.	C	-	-	-	-	-
100+38.5, Rt.	C	-	-	-	-	-
100+47.1, Lt.	B	47'	2-E	11.5	-	1-D, 1-G, 1-H, 1-I
100+59.3, Rt.	B	43'	3-E	11.5	11	1-D, 1-G, 1-H, 1-I
100+61.3, Lt.	C	-	-	-	-	-

A Joint Use Steel Pole With Mast Arm
B Standard Steel Pole With Mast Arm
C Pedestal Pole (10' Aluminum)
D Left Turn Sign
E Traffic Signal
F Pedestrian Signal With Push Button
G Street Name Sign
H Video Detection Camera
I Wind Damper

STREET NAME SIGN SUMMARY	
LEGEND	QUANTITY
Central Ave.	2
119th St West	2
TOTAL	4

Letters shall be series "E Modified".



RECAPITULATION OF TRAFFIC SIGNAL QUANTITIES

BID ITEM	QUANTITY	UNIT
TRAFFIC SIGNAL INSTALLATION (119TH. WEST AND CENTRAL)	1	L.S.
REMOVAL OF EXISTING SIGNAL	1	L.S.

L.E.D. Signal Heads: All lenses in each signal head shall be a self-contained, sealed unit designed to fit a regular 12-inch traffic signal housing. It shall incorporate a minimum of 186 high reliability, high intensity LED indicators. The lens shall provide a light beam spread of 30 degrees on all sides of its center axis which shall be designed to provide a 5 to 7 degree downward angle.

The lens shall be made of UV stabilized plastic. The rear cover shall be of non-flammable material and the entire unit shall be totally sealed to preclude the entrance of water, dust or other contaminants.

The self-contained, regulated power supply shall allow the unit to operate over an input voltage range between 89 and 135 volts A.C. and shall be configured in at least 3 parallel circuits for reliability. Light output shall be comparable to that provided by a standard, 12 inch traffic signal lens illuminated by a 150 watt incandescent lamp. The red wave length shall be 630 to 660 nm.

The manufacturer shall warrant the unit against defects in workmanship and materials for a period of at least five years after date of shipment. This warranty shall be assigned to the maintenance agency.



119TH. WEST AND CENTRAL INTERSECTION
PROJECT NAME

TRAFFIC SIGNAL WIRING PLAN
SHEET TITLE

LAC	WNJ	JRA
DESIGN BY:	DRAWN BY:	CHECKED BY:
JANUARY 2005	94238	4 / 7
DATE	JOB NO.	SHEET/OF