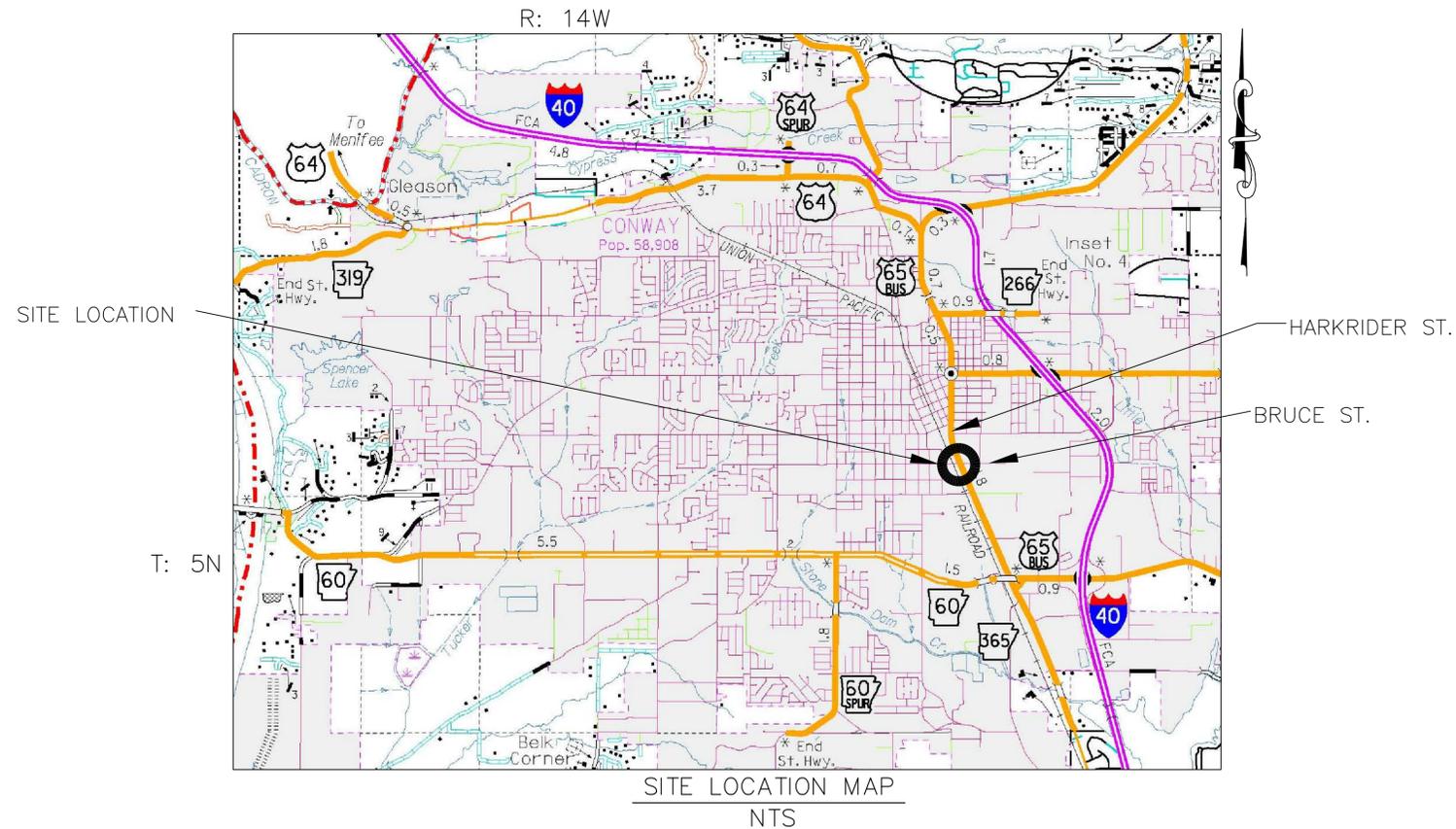


SITE LOCATION VICINITY MAP
NTS

FAULKNER COUNTY, ARKANSAS
CONSTRUCTION PLANS
TRAFFIC SIGNAL PLANS
HIGHWAY 65B (HARKRIDER STREET) &
BRUCE STREET
CONWAY ARKANSAS



ARK. HWY. DIST. NO. 8



SITE LOCATION

HARKRIDER ST.

BRUCE ST.

SITE LOCATION MAP
NTS

PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND DATED. CONTRACTORS ARE CAUTIONED AGAINST ORDERING EQUIPMENT BASED ON PRELIMINARY PLANS.



PETERS & ASSOCIATES
ENGINEERS, INC.

CIVIL & TRAFFIC ENGINEERING

5507 Ranch Drive - Suite 209 (501) 868-3999
 Little Rock, Arkansas 72223

12-11-2017

HARKRIDER STREET (HWY 65B) AND
BRUCE STREET
 CONWAY, ARKANSAS
 PROJECT NO.: P1774
 DECEMBER 11, 2017

INDEX OF SHEETS

SHEET	TITLE
1	TITLE SHEET
2	INDEX OF SHEETS AND GOVERNING SPECIFICATIONS
3	TRAFFIC SIGNAL NOTES
4	SUMMARY OF QUANTITIES
5	TRAFFIC SIGNAL PLAN, MAST ARMS AND CONDUIT
6	TRAFFIC SIGNAL PLAN, MAST ARMS AND CONDUIT
7	TRAFFIC SIGNAL WIRING PLAN
8	TRAFFIC SIGNAL CHARTS
9	PAVEMENT MARKINGS AND ADA RAMPS
10	PAVEMENT MARKING DETAILS (PM-1)
11	CONTROLLER CABINET UTILITY DRAWER (SD-5)
12	HEAVY DUTY PULL BOX (SD-6)
13	SIGNAL HEAD PLACEMENT (SD-8)
14	SERVICE POINT (SD-9)
15	STEEL POLE WITH MAST ARM (SD-11)
16	WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS (SD-WR1)

GENERAL NOTES

1. WORK ON STATE HIGHWAYS MUST CONFORM TO ARDOT SPECIFICATIONS.
2. THERE ARE NUMEROUS PUBLIC AND PRIVATE UTILITIES WITHIN AND ADJACENT TO THE LIMITS OF CONSTRUCTION. SOME EXISTING UTILITIES MAY NOT BE SHOWN ON THE PLANS. PRIOR TO BEGINNING ANY TYPE OF EXCAVATION, THE CONTRACTOR SHALL CONTACT THE VARIOUS UTILITY COMPANIES AND MAKE ARRANGEMENTS FOR THE LOCATION OF THE UTILITY ON THE GROUND. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN THE UTILITY MARKINGS UNTIL THEY ARE NO LONGER NEEDED. CONTRACTOR WILL BE RESPONSIBLE FOR ALL DAMAGES AND/OR REPAIR OF THE UTILITIES.
3. ALL LAND MONUMENTS LOCATED WITHIN THE CONSTRUCTION AREA SHALL BE PROTECTED IN ACCORDANCE WITH SECTION 107.12 OF THE STANDARD SPECIFICATIONS OF ARKANSAS DEPARTMENT OF TRANSPORTATION.
4. ALL TREES AND OTHER LANDSCAPE MATERIALS THAT DO NOT DIRECTLY INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE SPARED AS DIRECTED BY THE ENGINEER. CARE AND DISCRETION SHALL BE USED TO INSURE THAT ALL TREES NOT REMOVED SHALL BE PROTECTED DURING THE CONSTRUCTION OPERATIONS.
5. CONTRACTOR SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH ALL UTILITY LINES AND APPURTENANCES REQUIRING ADJUSTMENTS BECAUSE OF THIS CONSTRUCTION. CONTRACTOR SHALL FULLY COORDINATE SUCH ADJUSTMENTS WITH THE INVOLVED UTILITIES AS TO WHO SHALL ADJUST. NO SEPARATE PAYMENT SHALL BE MADE AS A RESULT OF ANY ADJUSTMENTS REQUIRED.
6. ALL EXISTING PAVEMENT AND CURB AND GUTTER OR OTHER EXISTING PHYSICAL FEATURES WHICH CONFLICT WITH THE NEW CONSTRUCTION, SHALL BE REMOVED. NO SEPARATE PAYMENT WILL BE MADE FOR REMOVALS, WHICH WILL BE CONSIDERED SUBSIDIARY TO SITE PREPARATION.
7. EXISTING UTILITY LOCATIONS ARE FROM UTILITY COMPANIES' RECORDS AND/OR ABOVE GROUND INSPECTION.
8. P.E. CERTIFIED SHOP DRAWINGS MUST BE SUBMITTED FOR APPROVAL. CERTIFICATION SHALL ALSO INDICATE COMPLIANCE WITH ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT MATERIAL SPECIFICATION REQUIREMENTS AND CONFORMANCE TO AASHTO DESIGN REQUIREMENTS FOR 90 MPH WIND LOADING FOR SIGNALS, MASTS AND SIGNS AS INDICATED.
9. ALL TRAFFIC SIGNAL EQUIPMENT SHALL COMPLY WITH THE LATEST EDITION OF THE THE STANDARD SPECIFICATIONS OF ARKANSAS DEPARTMENT OF TRANSPORTATION AND APPLICABLE SPECIAL PROVISIONS.

GOVERNING SPECIFICATIONS

ARKANSAS STATE HIGHWAY COMMISSION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EDITION OF 2014, AND THE FOLLOWING SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS:

NUMBER	TITLE
ERRATA	ERRATA FOR THE BOOK OF STANDARDS SPECIFICATIONS
SP	CABINET DRAWER ASSEMBLY
SP & 733	EDGE CARD VIDEO PROCESSOR
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES
SP	ELECTRICAL CONDUCTORS-IN-CONDUIT
SP & 707	LED COUNTDOWN PEDESTRIAN SIGNAL HEAD
SP & 706	LED TRAFFIC SIGNAL HEAD
SP	LUMINAIRE ASSEMBLY (CUTOFF TYPE)
SP	SERVICE POINT ASSEMBLY (TRAFFIC-CONTROL DEVICES)
SP	STREET NAME SIGN (MAST ARM MOUNTED)
	UTILITY ADJUSTMENTS
SP & 733	VIDEO DETECTOR (COLOR)
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT
SP	LOCAL CONTROLLER



PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND DATED. CONTRACTORS ARE CAUTIONED AGAINST ORDERING EQUIPMENT BASED ON PRELIMINARY PLANS.

12-11-2017

HIGHWAY 65B (HARKRIDER STREET)
AND BRUCE STREET

CONWAY, ARKANSAS

DESIGNED BY: EJP	INDEX OF SHEETS AND GOVERNING SPECIFICATIONS	SCALE: NTS
DRAWN BY: RMT		SHEET NO. 2
CHECKED BY: EJP	REVISED:	PROJ. NO: P1774
DATE: 12-11-2017		



PETERS & ASSOCIATES ENGINEERS, INC.

• CIVIL & TRAFFIC ENGINEERING •
5507 Ranch Drive - Suite 209 (501) 868-3999
Little Rock, Arkansas 72223

TRAFFIC SIGNAL NOTES

1. PERFORM ELECTRICAL WORK IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE NFPA 70 (2017) NATIONAL ELECTRICAL CODE, NFPA 101 (2015) LIFE SAFETY CODE, STATE ELECTRICAL CODE AND LOCAL ELECTRICAL CODE.
2. EXTEND GREEN EQUIPMENT GROUNDING CONDUCTOR (E.G.C.) FROM GROUND BAR AT MAIN BREAKER TO CONTROL PANEL AND TO FIRST POLE. SOLIDLY BOND E.G.C. TO GROUND LUG OF CONTROL CABINET AND TO POLE GROUND. ENSURE THAT ONLY ONE NEUTRAL-TO-GROUND BOND EXISTS IN THE SYSTEM AND THAT IT IS AT THE MAIN BREAKER.
3. ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAIN-TIGHT BREAKER (MAIN BREAKER), GALVANIZED STEEL SERVICE RISER, METER LOOP (IF REQUIRED), AND WEATHERHEAD AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. IF THE SERVICE POINT IS OVER 10 FEET FROM THE CONTROLLER, THE CONTRACTOR SHALL PROVIDE AND INSTALL A SEPARATE TWO CIRCUIT EXTERNAL BREAKER (SECONDARY BREAKER) ON OR NEAR THE TRAFFIC SIGNAL CONTROLLER CABINET AND SHALL INSTALL CONDUIT, ELECTRICAL SERVICE WIRE (2c/#6 USE RATED, WITH GROUND TYPICAL), AND PERFORM WIRING TO TAP INTO THE CITY'S/COUNTY'S MAIN BREAKER AS PART OF THIS CONTRACT. CONDUIT IS PAID FOR AS A SEPARATE ITEM OF THIS CONTRACT. TWO CIRCUIT BREAKERS, CONSIDERED SUBSIDIARY TO THE CONTROL EQUIPMENT, ARE NEEDED WHERE STREET LIGHTING IS INCLUDED. AS PART OF THE SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2c/#12 A.W.G. UF RATED, TYPICAL) SHALL BE KEPT FROM THE CIRCUIT SERVING THE TRAFFIC SIGNAL CONTROL EQUIPMENT FROM THE POINT OF TIE-IN AT THE SECONDARY BREAKER PROVIDED BY THE CONTRACTOR.
4. CONTRACTOR SHALL CONNECT A SEPARATE NEUTRAL FOR EACH LOAD SWITCH REPRESENTED ON EACH SIGNAL POLE.
5. TRAFFIC CONTROLLER CABINET AND LAYOUT SHALL BE SUCH THAT IT IS NOT NECESSARY TO SHUT DOWN POWER OR REMOVE LOAD SWITCHES IN ORDER TO EASILY TEST OR MODIFY DETECTOR INPUTS TO THE CONTROLLER.
6. CONTROLLER CABINET SHALL BE WIRED SUCH THAT DURING FLASH OPERATIONS POWER TO THE LOAD SWITCHES CANNOT BACKFEED TO LOAD SWITCH POWER BUSS.
7. ALL PARTS OF THIS INSTALLATION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, STANDARD DRAWINGS AND WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, CURRENT EDITION.
8. CONDUIT INSTALLED UNDER ROADWAY SURFACES SHALL BE INSTALLED BY PUSHING OR BORING METHODS. IF THE ENGINEER DETERMINES THIS IS NOT FEASIBLE, THEN A TRENCHING METHOD AS SHOWN IN THE STANDARD DRAWINGS MAY BE USED.
9. TRAFFIC SIGNAL POLES SHALL BE GALVANIZED. BACKPLATES SHALL BE SUPPLIED FOR ALL SIGNAL HEADS.
10. PAVEMENT MARKINGS SHOWN FOR REFERENCE ONLY. SEE PERMANENT PAVEMENT MARKING DETAILS.
11. FOUNDATION FOR ALL POLES SHALL BE EXTENDED IF NECESSARY TO ACCOMMODATE THE REQUIREMENTS FOR SIGNAL HEAD CLEARANCE ABOVE ROADWAY ONLY AT LOCATIONS WHERE THE GROUND ELEVATION AT THE POLE IS BELOW THE ELEVATION OF THE ROADWAY (SEE NOTES ON STANDARD DRAWING). PAYMENT WILL BE INCLUDED IN SECTION 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
12. ALL CONCRETE PULL BOXES SHALL BE (TYPE 2 HD) UNLESS OTHERWISE INDICATED. ALL CONDUIT SHALL BE THREE (3") INCH DIAMETER UNLESS SPECIFIED ON PLANS.
13. CONTRACTOR SHALL NOTIFY ALL EXISTING UTILITY OWNERS BEFORE BEGINNING WORK ON THIS PROJECT.
14. LUMINAIRE ASSEMBLIES SHALL BE OF THE FULL CUTOFF TYPE.
15. HARDWARE INPUTS MAY BE DETERMINED BY SUPPLIER. EACH DETECTOR OUTPUT SHALL INPUT THE CONTROLLER THROUGH A SEPARATE INPUT UNLESS OTHERWISE NOTED AND BE PROGRAMMED TO ACTUATE THE ASSOCIATED PHASE. COMBINATION (COMB.) DETECTORS SHALL ALSO BE PROGRAMMED TO PROVIDE VEHICLE COUNT/OCCUPANCY DATA.
16. THE LOCAL RADIO WITH ANTENNA SHALL BE COMPATIBLE WITH THE EXISTING CLOSED LOOP COORDINATION SYSTEM IN THE CITY/COUNTY.
17. TO DETERMINE UTILITY CLEARANCES ABOVE THE TRAFFIC SIGNAL POLE, REFER TO THE POLE SCHEDULE FOR VERTICAL SHAFT HEIGHT. WHERE THE POLE SCHEDULE INDICATES THAT A LUMINAIRE ARM WILL BE USED, THIRTY-EIGHT (38') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE LUMINAIRE ARM. WHERE THE POLE SCHEDULE INDICATES A TRAFFIC SIGNAL POLE WITHOUT A LUMINAIRE ARM, A HEIGHT OF TWENTY-ONE (21') FEET SHOULD BE USED TO DETERMINE UTILITY CLEARANCE ABOVE THE TRAFFIC SIGNAL MAST ARM. AN ADDITIONAL SIX (6') FEET SHOULD BE USED DIRECTLY ABOVE "VIDEO DETECTOR" AT LOCATIONS SHOWN ON THE SIGNAL PLANS.
18. THE DESIRABLE MINIMUM DISTANCE FROM THE FACE OF ROADWAY CURB OR SHOULDER EDGE TO THE FACE OF NON-BREAKAWAY POLE OR OBSTRUCTION IS SIX (6') FEET. REFER TO TRAFFIC SIGNAL PLANS FOR SPECIFIC LOCATION OF POLES, CONTROLLER AND ANY OTHER NON-BREAKAWAY OBSTRUCTIONS. REFER TO "DESIGN PARAMETERS, MINIMUM CLEAR ZONE DISTANCE" FOR MINIMUM DISTANCE FROM THE EDGE OF TRAVELED WAY TO THE FACE OF A NON-BREAKAWAY POLE OR OBSTRUCTION. TRAFFIC SIGNAL POLES OR ANY OTHER NON-BREAKAWAY OBSTRUCTION SHALL NOT BE INSTALLED WITHIN THE CLEAR ZONE.
19. AS DETERMINED BY THE ENGINEER, FOUNDATION EMBEDMENT MAY BE DECREASED BY A MAXIMUM OF TWO FEET IF COMPETENT ROCK IS ENCOUNTERED PRIOR TO ACHIEVING PLAN EMBEDMENT AND AT LEAST HALF OF THE REMAINING PLAN EMBEDMENT LENGTH IS KEYED INTO COMPETENT ROCK.
20. CONNECTION OF TRAFFIC SIGNAL DISPLAY TO FIELD WIRING SHALL UTILIZE AN APPROVED TERMINAL STRIP BEHIND HAND-HOLE COVER AT BASE OF POLE. TERMINAL STRIP SHALL PROVIDE PROTECTION TO PREVENT EXPOSURE TO THE PUBLIC IN THE EVENT THAT POLE COVER IS MISSING. PAYMENT FOR TERMINAL STRIPS SHALL BE INCLUDED IN ITEM 714 TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CURRENT EDITION.
21. CONTROLLER CABINET LAYOUT AND ORIENTATION SHALL CONFORM TO IMSA STANDARDS.
22. ONE VIDEO PROGRAMMING MODULE SHALL BE PROVIDED FOR AIMING AND SETUP OF DETECTORS IF THE VIDEO SYSTEM CANNOT BE ADJUSTED THROUGH HARDWARE AND SOFTWARE PROVIDED BY ITEMS WITHIN THE JOB.
23. TRAFFIC SIGNAL CONTRACTOR MUST NOTIFY RESIDENT ENGINEER OR ASSIGNED DEPARTMENT PROJECT INSPECTOR EACH DAY PRIOR TO SIGNAL RELATED WORK. NO WORK ON TRAFFIC SIGNALS WILL BE ALLOWED OR APPROVED WITHOUT THIS PRIOR NOTIFICATION.
24. ALL STEEL POLES SHALL BE DESIGNED TO MEET THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4th EDITION (2001) WITH 2003 AND 2006 INTERIMS.
25. DOOR PANEL TEST PUSH BUTTONS SHALL ACTUATE INDICATED PHASES. DETECTOR ASSIGNMENTS AND/OR SIDE PANEL JUMPERS MAY REQUIRE MODIFICATION.
26. ALL SYSTEM DETECTOR RACKS AND ASSOCIATED EQUIPMENT SHALL BE PROTECTED BY THE MAIN CONTROLLER CABINET POWER SURGE PROTECTION.

SPECIAL NOTES

1. THERE SHALL BE NO DEVIATION FROM THIS PLAN WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER.
2. CONTRACTOR SHALL FIELD VERIFY ALL POLE AND MAST ARM LOCATIONS WITH REGARD TO HORIZONTAL PLACEMENT FOR CLEARANCE FROM UTILITIES AND OTHER APPURTENANCES AND VERIFY VERTICAL CLEARANCE FOR POLE SHAFT AND MAST ARM FOR ABSENCE OF CONFLICT WITH OVERHEAD UTILITIES AND OTHER APPURTENANCES. CONTRACTOR SHALL OBTAIN APPROVAL OF PERMITTING JURISDICTIONS PRIOR TO ORDERING POLES AND MAST ARMS.
3. IF DEVIATION FROM THIS PLAN IS NECESSARY, ENGINEER SHALL BE NOTIFIED AND FINAL REVISED LOCATIONS OF POLES AND MAST ARMS SHALL BE DOCUMENTED.
4. DESIGN AND LAYOUT OF 18" STREET NAME SIGNS TO BE MOUNTED ON MAST ARMS SHALL BE PROVIDED TO THE CITY FOR APPROVAL PRIOR TO FABRICATION AND MOUNTING.
5. SURVEY BASE BY TIM TYLER SURVEYING. BRUCE STREET ROADWAY IMPROVEMENTS BY CITY OF CONWAY.
6. P.E. CERTIFIED SHOP DRAWINGS FOR MAST ARMS AND POLES MUST BE SUBMITTED FOR APPROVAL. CERTIFICATION SHALL ALSO INDICATE COMPLIANCE WITH AHTD MATERIALS REQUIREMENTS AND CONFORMANCE TO AASHTO DESIGN REQUIREMENTS FOR 90 MPH WIND LOADING SIGNALS, MASTS AND SIGNS AS INDICATED.
7. TRAFFIC SIGNAL POLES, MAST ARMS AND FOUNDATION DESIGNS SHALL CONFORM TO AASHTO 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS", FOR 90 MPH WIND ZONE TO SUPPORT FIXED SIGNALS WITH ACTUAL AREAS AS CALLED FOR BY SIGNAL PLACEMENT AS SHOWN ON THESE PLANS.
8. ALL EQUIPMENT SHALL CONFORM TO THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION PUBLISHED BY THE ARKANSAS DEPARTMENT OF TRANSPORTATION AND APPLICABLE SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS.
9. CITY OF CONWAY WILL RETAIN OWNERSHIP OF ALL REMOVED EXISTING TRAFFIC SIGNAL EQUIPMENT AND THE CONTRACTOR SHALL DELIVER SUCH SIGNAL EQUIPMENT TO THE DESIGNATED LOCATION OF THE CITY.
10. CONTRACTOR TO RE-USE AND RE-LOCATE EXISTING RAILROAD PREEMPT INTERFACE EQUIPMENT TO NEW TRAFFIC SIGNAL CONTROLLER. INSTALL NEW 1.25" CONDUIT AND NEW WIRE FROM EXISTING RAILROAD CONTROLLER TO NEW TRAFFIC SIGNAL CONTROLLER.



PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND DATED. CONTRACTORS ARE CAUTIONED AGAINST ORDERING EQUIPMENT BASED ON PRELIMINARY PLANS.

12-11-2017

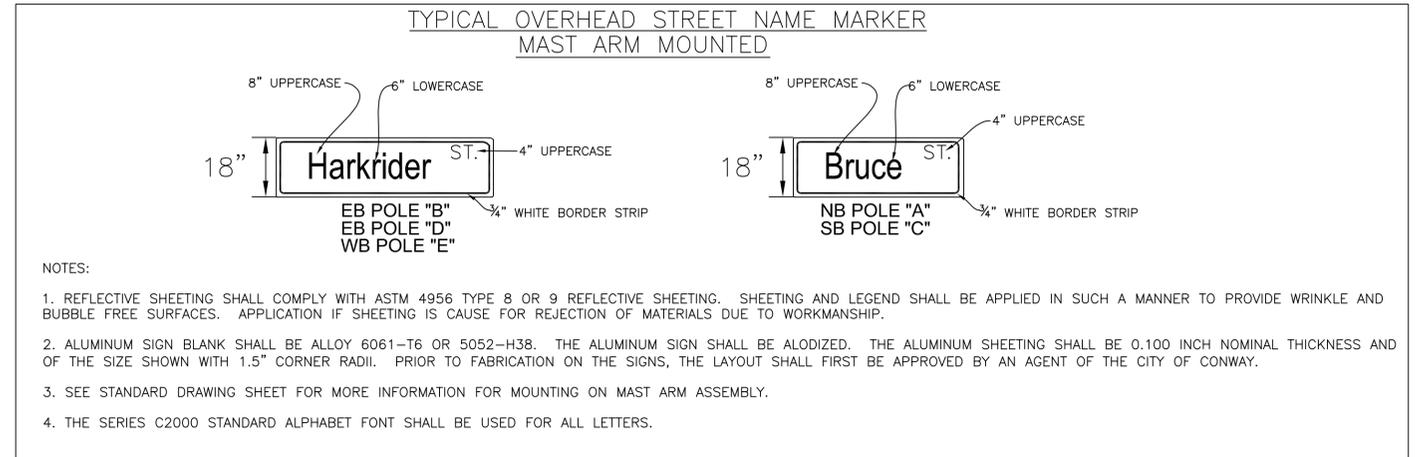
HIGHWAY 65B (HARKRIDER STREET) & BRUCE STREET		
CONWAY, ARKANSAS		
DESIGNED BY: EJP	TRAFFIC SIGNAL NOTES	SCALE: NTS
DRAWN BY: RMT		SHEET NO. 3
CHECKED BY: EJP	REVISED:	PROJ. NO: P1774
DATE: 12-11-2017	PETERS & ASSOCIATES ENGINEERS, INC. <small>CIVIL & TRAFFIC ENGINEERING</small>	
5507 Ranch Drive - Suite 209 Little Rock, Arkansas 72223 (501) 868-3999		

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
601	MOBILIZATION	1.00	LUMP SUM
SS & 603	MAINTENANCE OF TRAFFIC	1.00	LUMP SUM
604	REMOVAL OF PERMANENT PAVEMENT MARKINGS	260	LIN. FT.
641	WHEELCHAIR RAMPS (TYPE 3)		SQ. YD.
SP&701	SYSTEM LOCAL CONTROLLER TS2-TYPE 2 (8-PHASE)	1	EACH
SP&706	TRAFFIC SIGNAL HEAD LED (3-SECTION, 1-WAY)	11	EACH
SP & 706	TRAFFIC SIGNAL HEAD, LED, (4 SECTION, 1 WAY)	3	EACH
SP & 707	COUNTDOWN PEDESTRIAN SIGNAL HEAD, LED	4	EACH
708	ELECTRICAL CONDUCTORS-IN-CONDUIT (2C/6 A.W.G., E.G.C.)	15	LIN. FT.
708	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/8 A.W.G., E.G.C.)	818	LIN. FT.
708	ELECTRICAL CONDUCTORS-IN-CONDUIT (1C/12 A.W.G., E.G.C.)	168	LIN. FT.
708	TRAFFIC SIGNAL CABLE (5C/14 A.W.G.)	2,147	LIN. FT.
708	TRAFFIC SIGNAL CABLE (7C/14 A.W.G.)	224	LIN. FT.
708	TRAFFIC SIGNAL CABLE (20C/14 A.W.G.)	575	LIN. FT.
710	NON-METALLIC CONDUIT (3")	416	LIN. FT.
710	NON-METALLIC CONDUIT (2")	10	LIN. FT.
710	NON-METALLIC CONDUIT (1.25")	289	LIN. FT.
711	CONCRETE PULL BOX (TYPE 1)	2	EACH
711	CONCRETE PULL BOX (TYPE 2HD)	8	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (28')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (34')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (36')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (38')	1	EACH
714	TRAFFIC SIGNAL MAST ARM AND POLE WITH FOUNDATION (46')	1	EACH
715	TRAFFIC SIGNAL PEDESTAL POLE WITH FOUNDATION (15')	3	EACH
719	THERMOPLASTIC PAVEMENT MARKING WHITE (6")	650	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING YELLOW (6")	400	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (12")	358	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING WHITE (24")	24	LIN. FT.
719	THERMOPLASTIC PAVEMENT MARKING (ARROW)	2	EACH
719	THERMOPLASTIC PAVEMENT MARKING (WORD)	2	EACH
733	VIDEO CABLE	1,182	LIN. FT.
SP & 733	VIDEO DETECTOR (CLR)	6	EACH
733	VIDEO MONITOR (CLR)	1	EACH
SP&733	VEHICLE DETECTOR RACK (16 CHANNEL)	1	EACH
SP&733	CENTRAL CONTROL UNIT (8 CHANNEL)	1	EACH
SP	LED LUMINAIRE ASSEMBLY (INSTALL)	1	EACH
SP	ELECTRICAL CONDUCTORS FOR LUMINAIRES	168	LIN. FT.
SP	BATTERY BACKUP SYSTEM	1	EACH
SP	SERVICE POINT ASSEMBLY (2 CIRCUITS)	1	EACH
SP	18" STREET NAME SIGN	4	EACH
SP	REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	1.00	LUMP SUM

NOTE 1: CONWAY CORP WILL PROVIDE LUMINAIRE ASSEMBLY FOR CONTRACTOR TO INSTALL.

NOTE 2: TYPE 3 WHEELCHAIR RAMP QUANTITIES WILL BE COMPLETED AFTER FIRST ARDOT REVIEW.

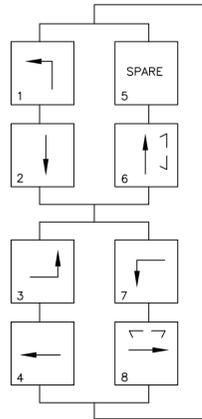


PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND DATED. CONTRACTORS ARE CAUTIONED AGAINST ORDERING EQUIPMENT BASED ON PRELIMINARY PLANS.

12-11-2017

HIGHWAY 65B (HARKRIDER STREET) & BRUCE STREET		
CONWAY, ARKANSAS		
DESIGNED BY: EJP	SUMMARY OF QUANTITIES	SCALE: NTS
DRAWN BY: RMT		SHEET NO. 4
CHECKED BY: EJP	REVISED:	PROJ. NO: P1774
DATE: 12-11-2017	 PETERS & ASSOCIATES ENGINEERS, INC. CIVIL & TRAFFIC ENGINEERING 5507 Ranch Drive - Suite 209 Little Rock, Arkansas 72223 (501) 868-3999	

PHASING DIAGRAM



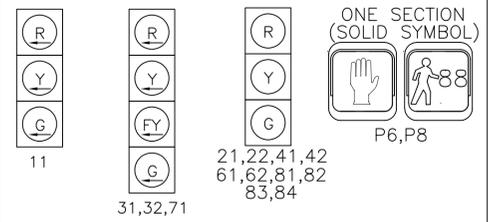
DESIGN PARAMETERS
 POSTED SPEED LIMIT:
 25 MPH EAST AND WEST APPROACHES.
 35 MPH NORTH AND SOUTH APPROACHES.

NO BUS STOPS.
 NEARBY RAILROAD TRACKS.
 NO FIRE STATION.
 NO PARKING.

LOCATION OF STOP LINES SHOWN ON
 PERMANENT PAVEMENT MARKING
 DETAILS (SEE SEPARATE SHEET).

2' CLEAR ZONE (FROM FACE OF CURB).

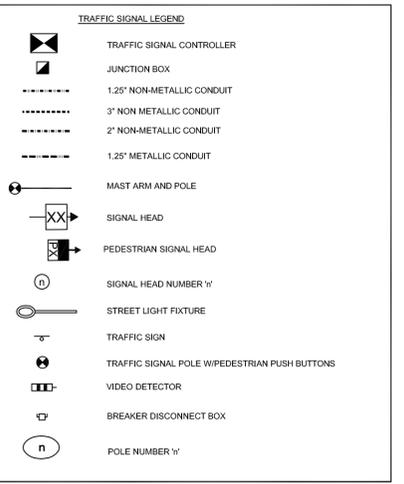
SIGNAL DISPLAY



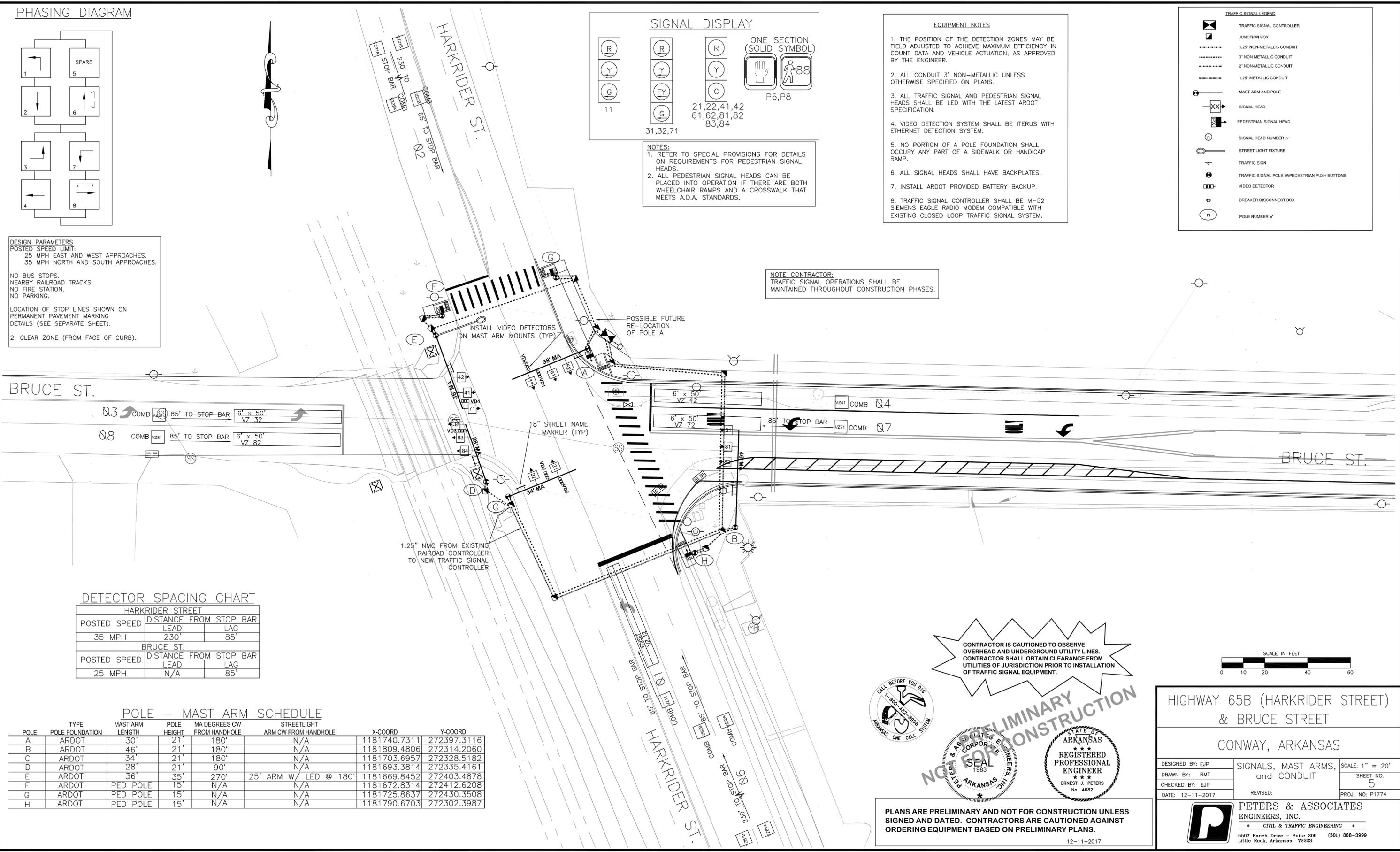
NOTES:
 1. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
 2. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMP AND A CROSSWALK THAT MEETS A.D.A. STANDARDS.

EQUIPMENT NOTES

1. THE POSITION OF THE DETECTION ZONES MAY BE FIELD ADJUSTED TO ACHIEVE MAXIMUM EFFICIENCY IN COUNT DATA AND VEHICLE ACTUATION, AS APPROVED BY THE ENGINEER.
2. ALL CONDUIT 3" NON-METALLIC UNLESS OTHERWISE SPECIFIED ON PLANS.
3. ALL TRAFFIC SIGNAL AND PEDESTRIAN SIGNAL HEADS SHALL BE LED WITH THE LATEST ARDOT SPECIFICATION.
4. VIDEO DETECTION SYSTEM SHALL BE ITERUS WITH ETHERNET DETECTION SYSTEM.
5. NO PORTION OF A POLE FOUNDATION SHALL OCCUPY ANY PART OF A SIDEWALK OR HANDICAP RAMP.
6. ALL SIGNAL HEADS SHALL HAVE BACKPLATES.
7. INSTALL ARDOT PROVIDED BATTERY BACKUP.
8. TRAFFIC SIGNAL CONTROLLER SHALL BE M-52 SIEMENS EAGLE RADIO MODEM COMPATIBLE WITH EXISTING CLOSED LOOP TRAFFIC SIGNAL SYSTEM.



NOTE CONTRACTOR:
 TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION PHASES.



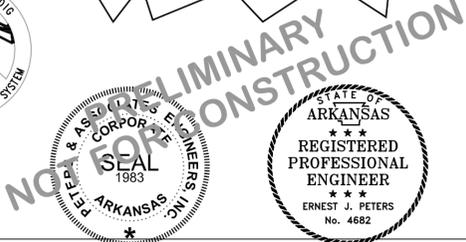
DETECTOR SPACING CHART

HARKRIDER STREET			
POSTED SPEED	DISTANCE FROM STOP BAR		LAG
	LEAD	LAG	
35 MPH	230'	85'	
BRUCE ST.			
POSTED SPEED	DISTANCE FROM STOP BAR		LAG
	LEAD	LAG	
25 MPH	N/A	85'	

POLE - MAST ARM SCHEDULE

POLE	TYPE	MAST ARM LENGTH	POLE HEIGHT	MA DEGREES CW FROM HANDHOLE	STREETLIGHT ARM CW FROM HANDHOLE	X-COORD	Y-COORD
A	ARDOT	30'	21'	180°	N/A	1181740.7311	272397.3116
B	ARDOT	46'	21'	180°	N/A	1181809.4806	272314.2060
C	ARDOT	34'	21'	180°	N/A	1181703.6957	272328.5182
D	ARDOT	28'	21'	90°	N/A	1181693.3814	272335.4161
E	ARDOT	36'	35'	270°	25' ARM W/ LED @ 180°	1181669.8452	272403.4878
F	ARDOT	PED POLE	15'	N/A	N/A	1181672.8314	272412.6208
G	ARDOT	PED POLE	15'	N/A	N/A	1181725.8637	272430.3508
H	ARDOT	PED POLE	15'	N/A	N/A	1181790.6703	272302.3987

CONTRACTOR IS CAUTIONED TO OBSERVE OVERHEAD AND UNDERGROUND UTILITY LINES. CONTRACTOR SHALL OBTAIN CLEARANCE FROM UTILITIES OF JURISDICTION PRIOR TO INSTALLATION OF TRAFFIC SIGNAL EQUIPMENT.



HIGHWAY 65B (HARKRIDER STREET) & BRUCE STREET

CONWAY, ARKANSAS

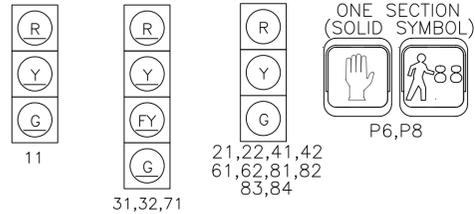
DESIGNED BY: EJP	SIGNALS, MAST ARMS, and CONDUIT	SCALE: 1" = 20'
DRAWN BY: RMT		SHEET NO. 5
CHECKED BY: EJP	REVISED:	PROJ. NO. P1774
DATE: 12-11-2017		



PETERS & ASSOCIATES ENGINEERS, INC.
 CIVIL & TRAFFIC ENGINEERING
 5507 Ranch Drive - Suite 209 Little Rock, Arkansas 72223
 (501) 868-3999

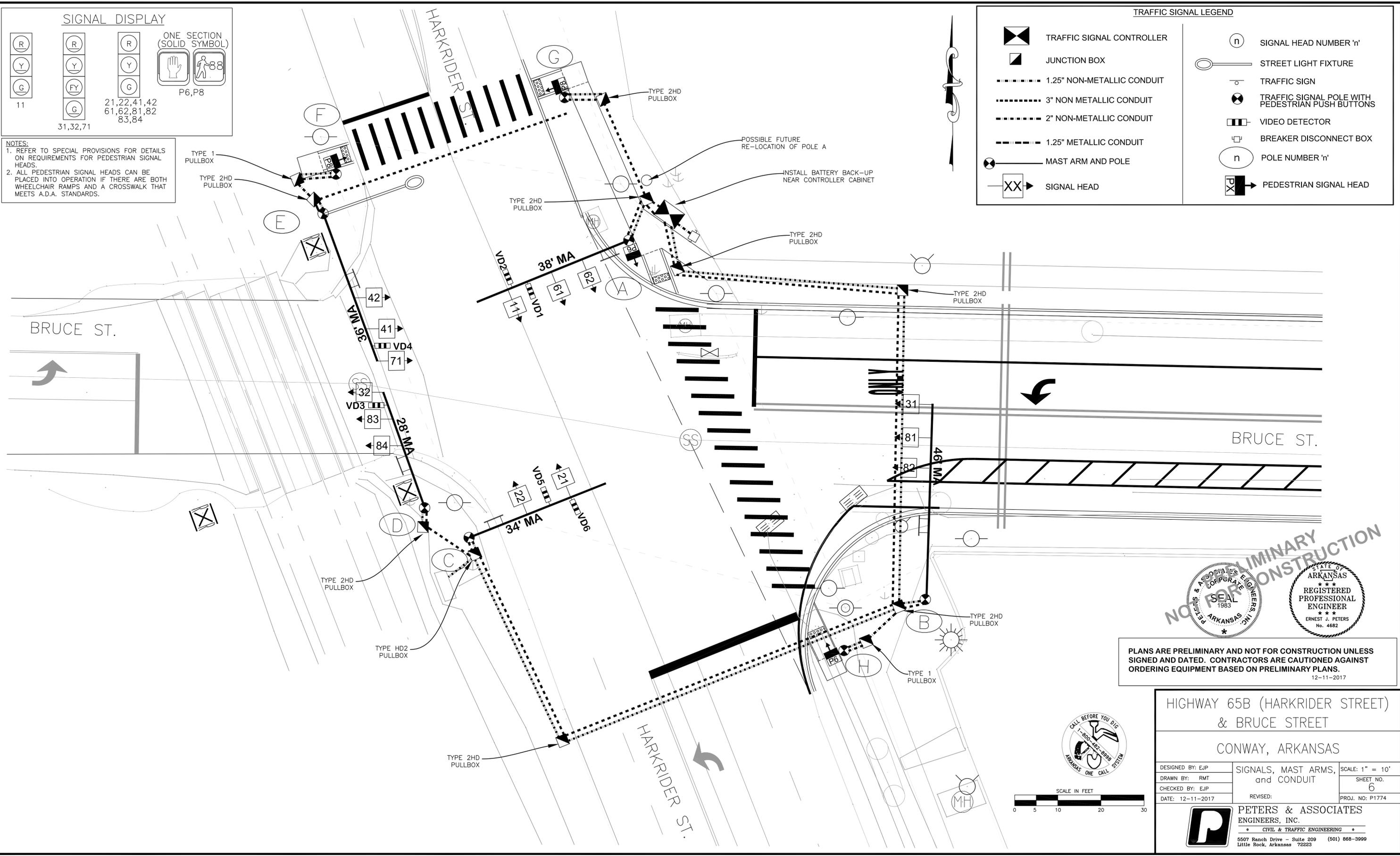
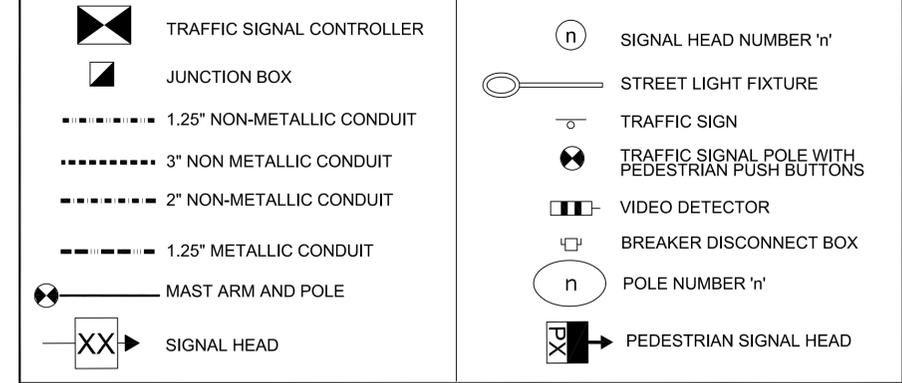
PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND DATED. CONTRACTORS ARE CAUTIONED AGAINST ORDERING EQUIPMENT BASED ON PRELIMINARY PLANS.

SIGNAL DISPLAY



NOTES:
1. REFER TO SPECIAL PROVISIONS FOR DETAILS ON REQUIREMENTS FOR PEDESTRIAN SIGNAL HEADS.
2. ALL PEDESTRIAN SIGNAL HEADS CAN BE PLACED INTO OPERATION IF THERE ARE BOTH WHEELCHAIR RAMPS AND A CROSSWALK THAT MEETS A.D.A. STANDARDS.

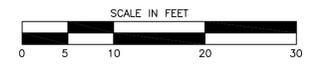
TRAFFIC SIGNAL LEGEND



NOT FOR CONSTRUCTION

STATE OF ARKANSAS
REGISTERED PROFESSIONAL ENGINEER
ERNEST J. PETERS
No. 4682

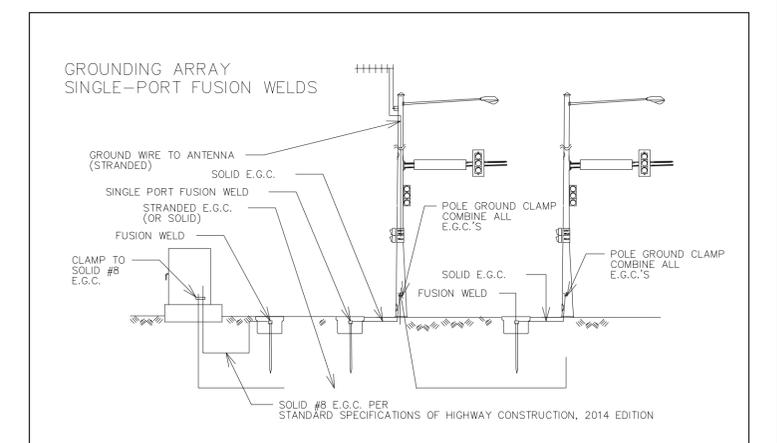
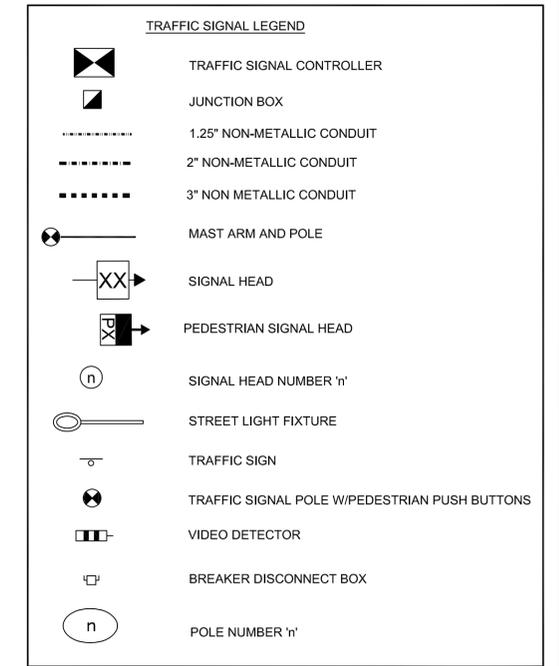
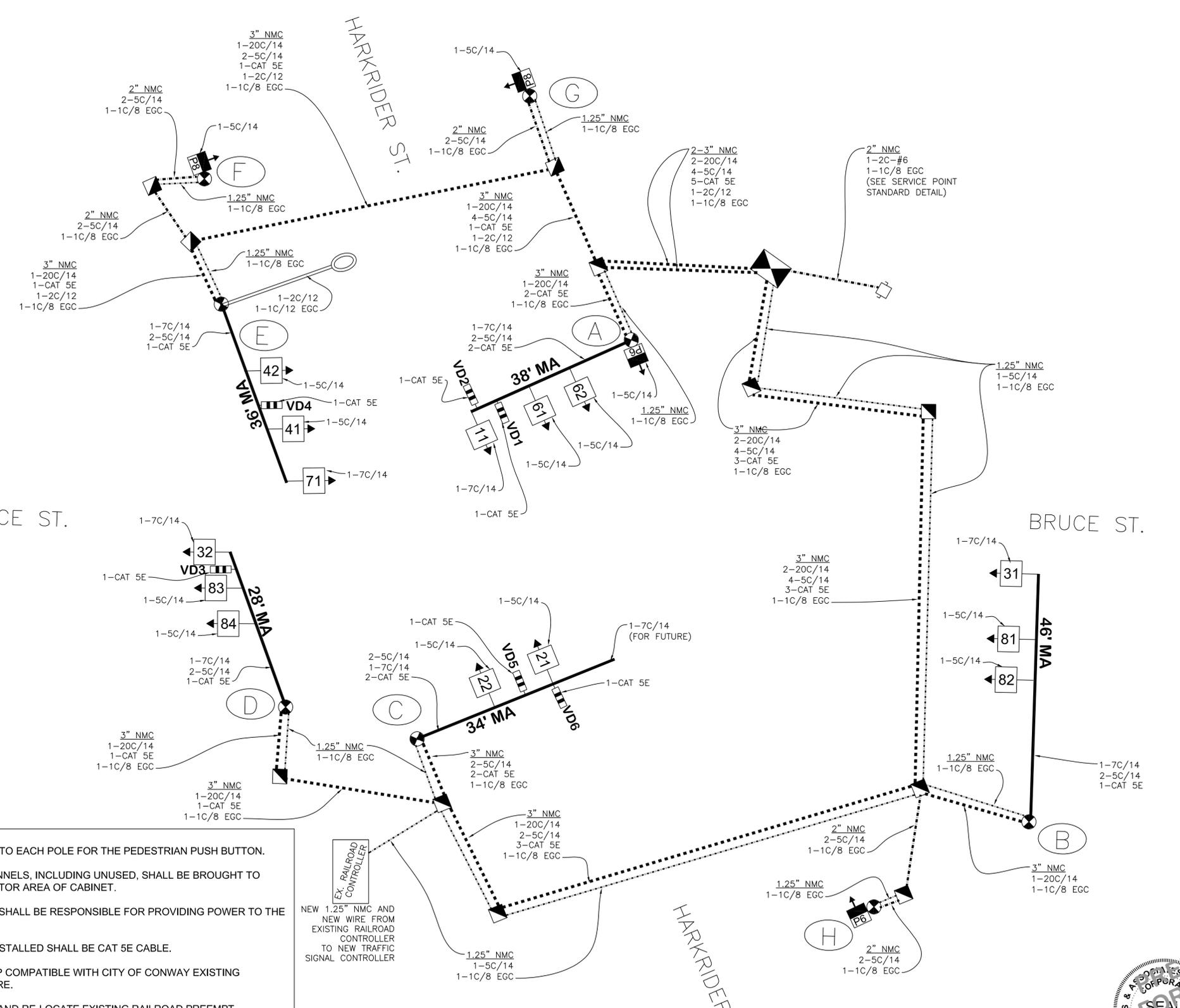
PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND DATED. CONTRACTORS ARE CAUTIONED AGAINST ORDERING EQUIPMENT BASED ON PRELIMINARY PLANS.
12-11-2017



HIGHWAY 65B (HARKRIDER STREET) & BRUCE STREET
CONWAY, ARKANSAS

DESIGNED BY: EJP	SIGNALS, MAST ARMS, and CONDUIT	SCALE: 1" = 10'
DRAWN BY: RMT		SHEET NO. 6
CHECKED BY: EJP	REVISED:	PROJ. NO: P1774
DATE: 12-11-2017		

P PETERS & ASSOCIATES ENGINEERS, INC.
CIVIL & TRAFFIC ENGINEERING
5507 Ranch Drive - Suite 209 Little Rock, Arkansas 72223 (501) 868-3999

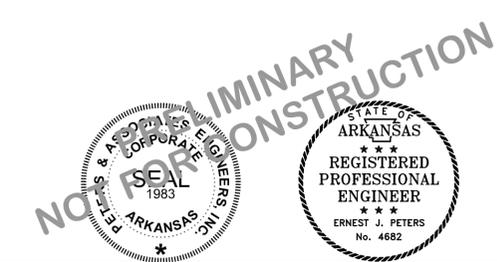


- NOTES TO CONTRACTOR:**
- ONE SEPARATE 5C IS RUN TO EACH POLE FOR THE PEDESTRIAN PUSH BUTTON.
 - ALL DETECTOR RACK CHANNELS, INCLUDING UNUSED, SHALL BE BROUGHT TO TERMINAL STRIP IN DETECTOR AREA OF CABINET.
 - THE LOCAL GOVERNMENT SHALL BE RESPONSIBLE FOR PROVIDING POWER TO THE SERVICE POINT.
 - ALL VIDEO CABLE TO BE INSTALLED SHALL BE CAT 5E CABLE.
 - INSTALL BATTERY BACK-UP COMPATIBLE WITH CITY OF CONWAY EXISTING EQUIPMENT AND HARDWARE.
 - CONTRACTOR TO RE-USE AND RE-LOCATE EXISTING RAILROAD PREEMPT INTERFACE EQUIPMENT TO NEW TRAFFIC SIGNAL CONTROLLER. INSTALL NEW 1.25" CONDUIT AND NEW WIRE FROM EXISTING RAILROAD CONTROLLER TO NEW TRAFFIC SIGNAL CONTROLLER.
 - CONWAY CORP WILL PROVIDE LUMINAIRE ASSEMBLY FOR CONTRACTOR TO INSTALL.
 - TRAFFIC SIGNAL OPERATIONS SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION PHASES.

EX. RAILROAD CONTROLLER
NEW 1.25" NMC AND NEW WIRE FROM EXISTING RAILROAD CONTROLLER TO NEW TRAFFIC SIGNAL CONTROLLER



CONTRACTOR IS CAUTIONED TO OBSERVE OVERHEAD AND UNDERGROUND UTILITY LINES. CONTRACTOR SHALL OBTAIN CLEARANCE FROM UTILITIES OF JURISDICTION PRIOR TO INSTALLATION OF TRAFFIC SIGNAL EQUIPMENT.



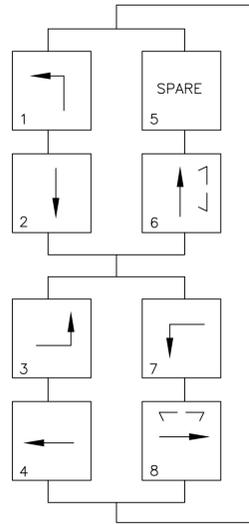
PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND DATED. CONTRACTORS ARE CAUTIONED AGAINST ORDERING EQUIPMENT BASED ON PRELIMINARY PLANS.
12-11-2017

HIGHWAY 65B (HARKRIDER STREET) & BRUCE STREET
CONWAY, ARKANSAS

DESIGNED BY: EJP	TRAFFIC SIGNAL WIRING PLAN	SCALE: NTS
DRAWN BY: RMT		SHEET NO. 7
CHECKED BY: EJP		PROJ. NO: P1774
DATE: 12-11-2017	REVISED:	

PETERS & ASSOCIATES ENGINEERS, INC.
CIVIL & TRAFFIC ENGINEERING
5507 Ranch Drive - Suite 209 Little Rock, Arkansas 72223 (501) 868-3999

PHASING
DIAGRAM



INTERVAL CHART

SIGNAL FACES	HARKRIDER STREET (HWY 65B) AND BRUCE STREET														FLASH SEQ.
	1+6	CLR.	2+5	CLR.	2+6	CLR.	3+7	CLR.	3+8	CLR.	4+7	CLR.	4+8	CLR.	
11	←G	*	←R	←R	←R										
21&22	R	R	G	**	G	**	R	R	R	R	R	R	R	R	R
31&32	←R	←R	←R	←R	←R	←R	←G	*	←G	***	←FY	***	←FY	***	←R
41&42	R	R	R	R	R	R	R	R	R	R	G	**	G	**	R
61&62	G	**	R	R	G	**	R	R	R	R	R	R	R	R	R
71	←R	←R	←R	←R	←R	←R	←G	*	←FY	***	←G	***	←FY	***	←R
81,82,83&84	R	R	R	R	R	R	R	R	G	**	R	R	G	**	R
P6	W	FDW	DW	DW	BLK										
P8	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FDW	BLK

* DENOTES GREEN OR YELLOW ARROW DEPENDING ON NEXT PHASE
 ** DENOTES GREEN OR YELLOW BALL DEPENDING ON NEXT PHASE
 *** DENOTES FLASHING YELLOW ARROW OR YELLOW ARROW DEPENDING ON NEXT PHASE

DETECTOR CHART

DETECTOR SYSTEM DESCRIPTION											
(HWY 65B/HARKRIDER ST.) / (BRUCE ST.) DETECTOR ASSIGNMENTS			HARDWARE INPUTS BY SUPPLIER			PROGRAM ASSIGNMENTS			COMMENTS	TUBE LENGTHS	
DET. ID #	LOCATION DIRECTION	TPYE	DET. #	CAB. TRM. #	AMP CHN. #	CON. IMP. #	PHS	SYSTEM DET. #			MASTER SYSTEM DETECTOR NUMBERS
Vz11	NB LEFT TURN FAR	COMB.			1	V9	1	1		VD1	23"
Vz12	NB LEFT TURN	LOCAL			2	V1	1			VD1	23"
Vz21 A&B	SB ADVANCE	LOCAL			5	V2	2			VD2	23"
Vz22 A&B	SB NEAR	COMB.			6	V10	2	2		VD5	58"
Vz31	EB LEFT TURN FAR	COMB.			9	V11	3	3		VD3	23"
Vz32	EB LEFT TURN	LOCAL			10	V3	3			VD3	23"
Vz41	WB ADVANCE	COMB.			13	V12	4	4		VD4	23"
Vz42	WB NEAR	LOCAL			14	V4	4			VD4	23"
Vz61 A&B	NB ADVANCE	LOCAL			3	V6	6			VD6	58"
Vz62 A&B	NB NEAR	COMB.			4	V14	6	6		VD1	23"
Vz71	WB LEFT TURN FAR	COMB.			15	V15	7	7		VD4	23"
Vz72	WB LEFT TURN	LOCAL			16	V7	7			VD4	23"
Vz81	EB ADVANCE	COMB.			11	V16	8	8		VD3	23"
Vz82	EB NEAR	LOCAL			12	V8	8			VD3	23"
PB6	EAST LEG	PED.				P6	6				
PB8	NORTH LEG	PED.				P8	8				
SPARE: 7 & 8											

CONTROLLER INPUT ABBREVIATIONS:

V = VEHICLE INPUT
 D = SYSTEM OR AUXILIARY INPUT
 P = PEDESTRIAN INPUT

NOTE: "AMP CHN =" REFERS TO THE RACK OUTPUT POSITION.
 THIS IS WIRED TO CONTROLLER INPUT DETECTOR NUMBER WHICH IS PROGRAMMED TO ACTUATE THE DESIGNATED PHASE.
 EXAMPLE: V9 = SYSTEM DETECTOR 1, V10 = SYSTEM DETECTOR 2



PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND DATED. CONTRACTORS ARE CAUTIONED AGAINST ORDERING EQUIPMENT BASED ON PRELIMINARY PLANS.
 12-11-2017

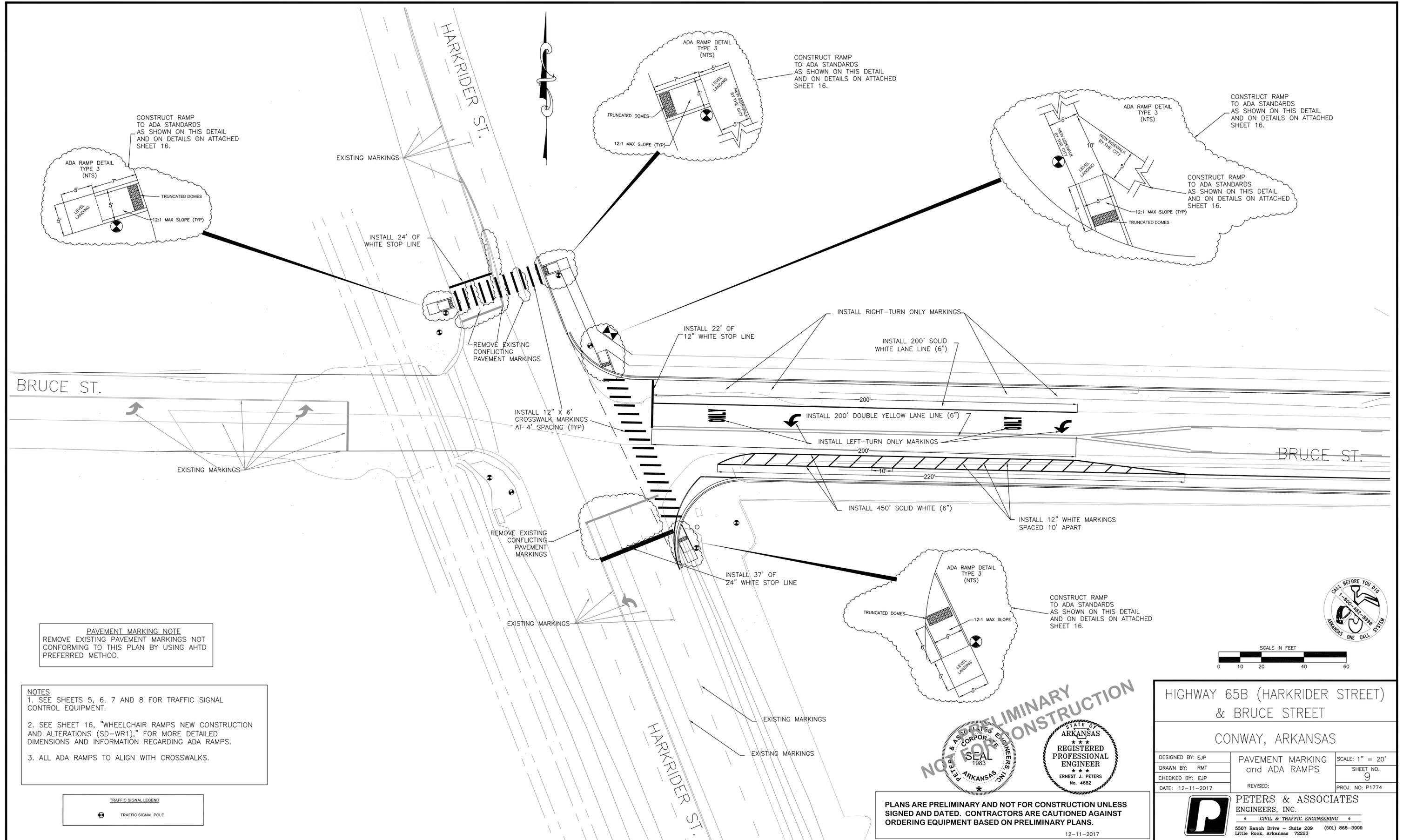
HIGHWAY 65B (HARKRIDER STREET)
 & BRUCE STREET

CONWAY, ARKANSAS

DESIGNED BY: EJP	TRAFFIC SIGNAL CHARTS	SCALE: NTS
DRAWN BY: RMT		SHEET NO. 8
CHECKED BY: EJP	REVISED:	PROJ. NO: P1774
DATE: 12-11-2017		

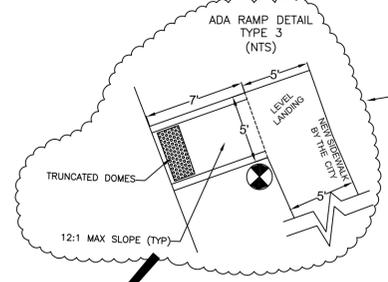


PETERS & ASSOCIATES
 ENGINEERS, INC.
 CIVIL & TRAFFIC ENGINEERING
 5507 Ranch Drive - Suite 209 (501) 868-3999
 Little Rock, Arkansas 72223

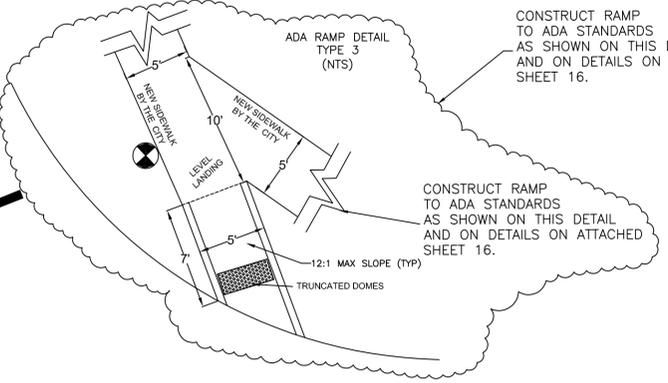


PAVEMENT MARKING NOTE
 REMOVE EXISTING PAVEMENT MARKINGS NOT CONFORMING TO THIS PLAN BY USING AHTD PREFERRED METHOD.

- NOTES**
1. SEE SHEETS 5, 6, 7 AND 8 FOR TRAFFIC SIGNAL CONTROL EQUIPMENT.
 2. SEE SHEET 16, "WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS (SD-WR1)," FOR MORE DETAILED DIMENSIONS AND INFORMATION REGARDING ADA RAMPS.
 3. ALL ADA RAMPS TO ALIGN WITH CROSSWALKS.

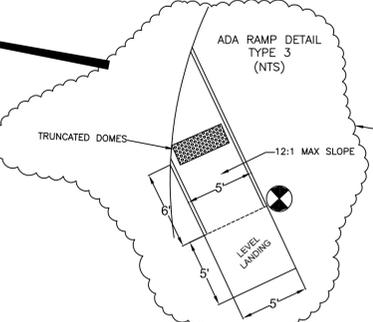


CONSTRUCT RAMP TO ADA STANDARDS AS SHOWN ON THIS DETAIL AND ON DETAILS ON ATTACHED SHEET 16.



CONSTRUCT RAMP TO ADA STANDARDS AS SHOWN ON THIS DETAIL AND ON DETAILS ON ATTACHED SHEET 16.

CONSTRUCT RAMP TO ADA STANDARDS AS SHOWN ON THIS DETAIL AND ON DETAILS ON ATTACHED SHEET 16.



CONSTRUCT RAMP TO ADA STANDARDS AS SHOWN ON THIS DETAIL AND ON DETAILS ON ATTACHED SHEET 16.



NOT FOR CONSTRUCTION

STATE OF ARKANSAS
 REGISTERED PROFESSIONAL ENGINEER
 ERNEST J. PETERS
 No. 4682

PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION UNLESS SIGNED AND DATED. CONTRACTORS ARE CAUTIONED AGAINST ORDERING EQUIPMENT BASED ON PRELIMINARY PLANS.

12-11-2017

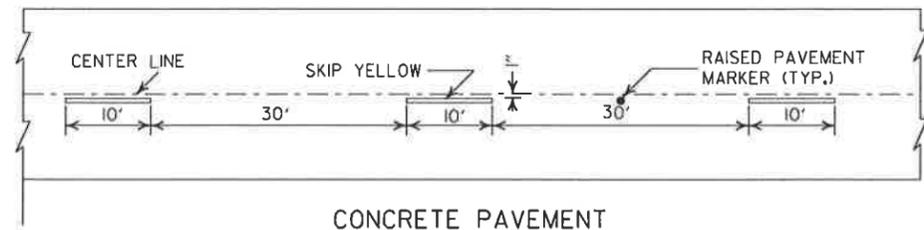
HIGHWAY 65B (HARKRIDER STREET) & BRUCE STREET

CONWAY, ARKANSAS

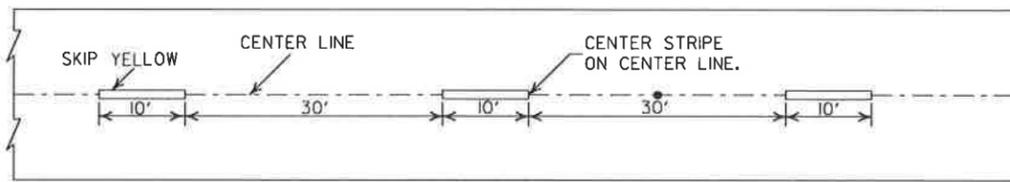
DESIGNED BY: EJP	PAVEMENT MARKING and ADA RAMPS	SCALE: 1" = 20'
DRAWN BY: RMT		SHEET NO. 9
CHECKED BY: EJP		PROJ. NO: P1774
DATE: 12-11-2017	REVISED:	



PETERS & ASSOCIATES ENGINEERS, INC.
 CIVIL & TRAFFIC ENGINEERING
 5507 Ranch Drive - Suite 209 Little Rock, Arkansas 72223 (501) 868-3999

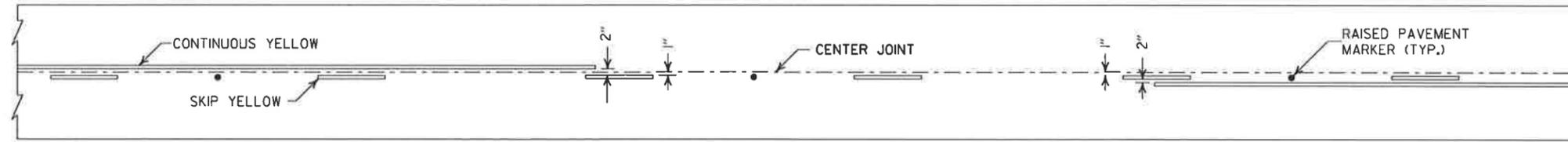


CONCRETE PAVEMENT



ASPHALT PAVEMENT

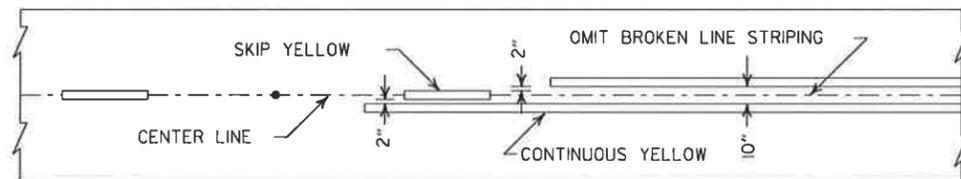
BROKEN LINE STRIPING



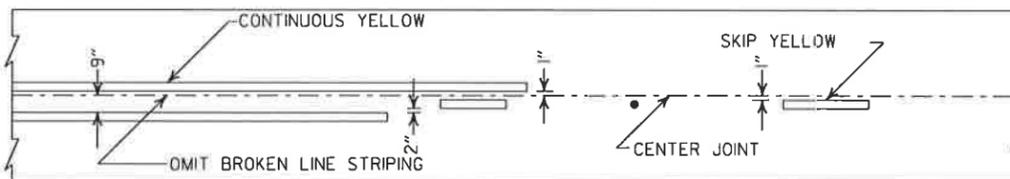
SOLID LINE STRIPING ON CONCRETE PAVEMENT



SOLID LINE STRIPING ON ASPHALT PAVEMENT

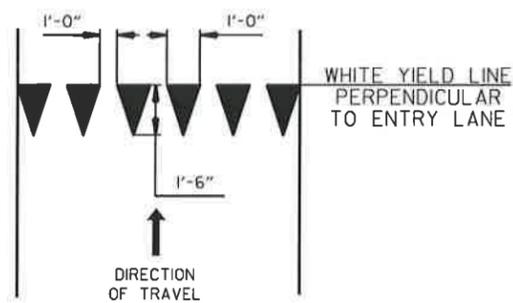


ASPHALT PAVEMENT

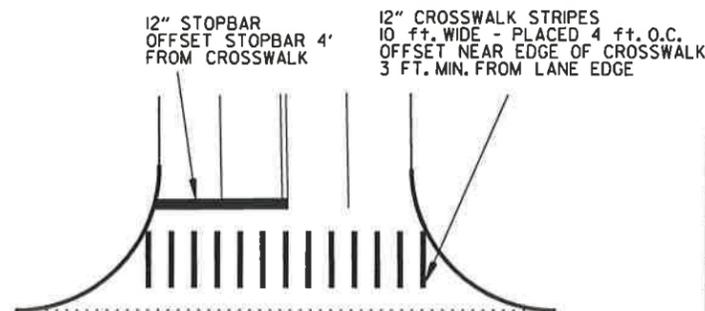


CONCRETE PAVEMENT

STRIPING AT ADJACENT NO PASSING LANES



YIELD LINE DETAIL

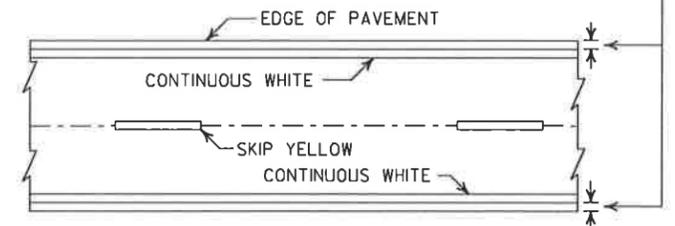


CROSSWALK AND STOPBAR DETAILS

NOTES:

1. REFER TO THE STRIPING DETAILS FOR PAVEMENT MARKING LINE WIDTHS.
2. THIS DRAWING SHALL BE USED IN CONJUNCTION WITH THE LATEST REVISED ADDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."
3. RAISED PAVEMENT MARKERS SHALL BE PLACED ON AN 80 FEET SPACING UNLESS OTHERWISE SHOWN IN THE PLANS.

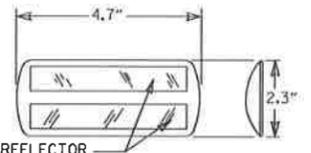
2" FOR ASPHALT OR CONCRETE PAVEMENT
6" FOR BITUMINOUS SURFACE TREATMENT



PAVEMENT EDGE LINE MARKING

NOTE:
THE RED LENS OF THE TYPE II R.P.M. SHALL FACE THE INCORRECT TRAFFIC MOVEMENT.

TYPE II
RED/CLEAR OR
YELLOW/YELLOW



PRISMATIC REFLECTOR

NOTE:
DIMENSIONS SHOWN FOR RAISED PAVEMENT MARKERS ARE TYPICAL. THE CONTRACTOR MAY SUBSTITUTE SIMILAR MARKERS WITH THE APPROVAL OF THE ENGINEER. REQUESTING APPROVAL FOR SIMILAR MARKERS MAY BE MADE BY REFERRING TO THE AHTD QUALIFIED PRODUCTS LIST.



DETAIL OF STANDARD RAISED PAVEMENT MARKERS

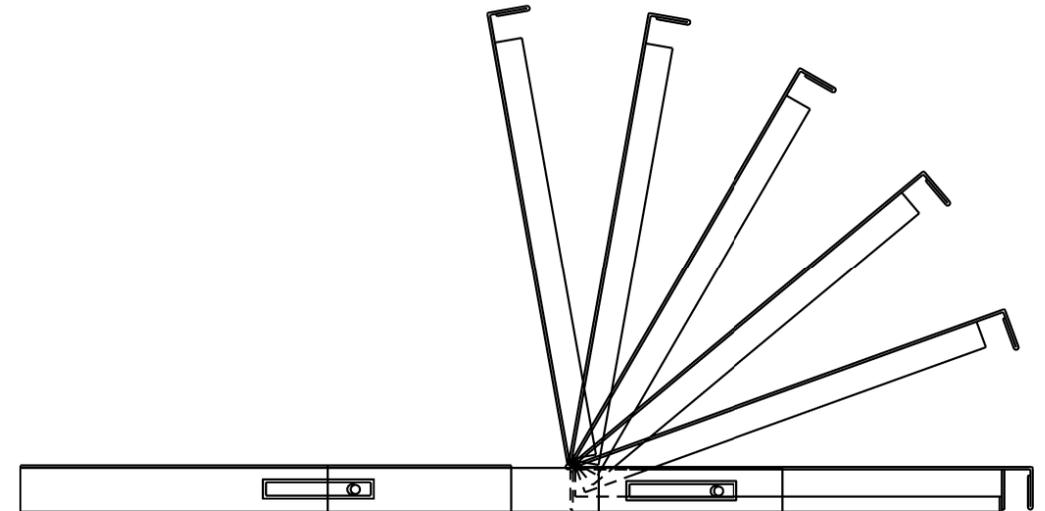
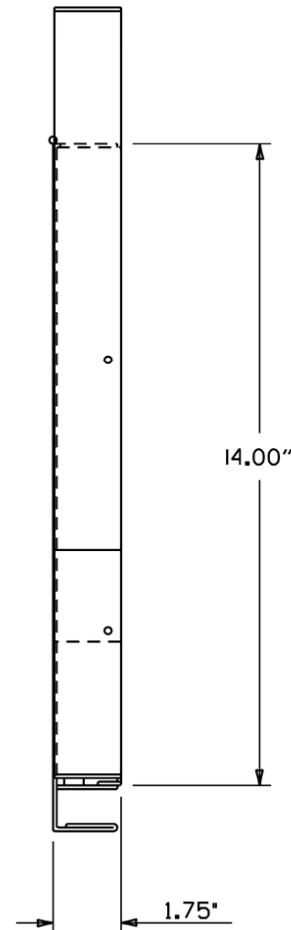
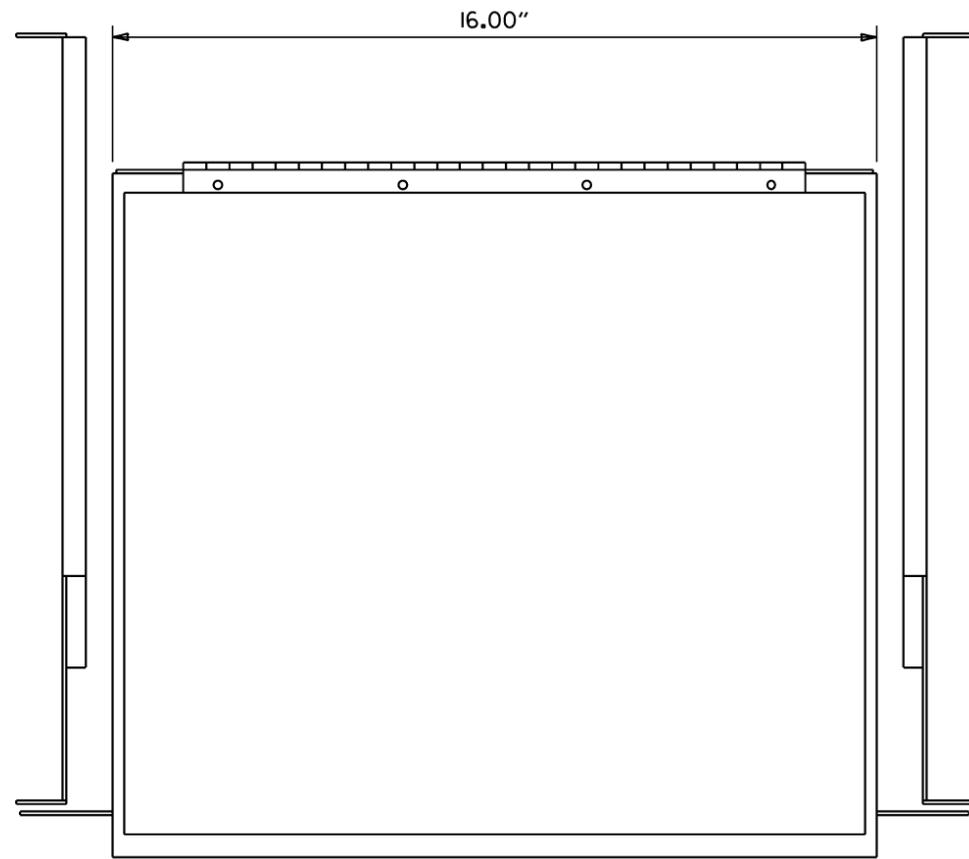
6-1-17	ADDED YIELD LINE DETAIL	
5-12-16	REVISED LINE WIDTHS, SPACING, & NOTES	
9-12-13	REVISED DETAIL OF STANDARD RAISED PAVEMENT MARKERS	
11-17-10	REVISED GENERAL NOTES & REMOVED PLOWABLE PAV'T. MRKRS	
11-18-04	REVISED NOTE 2 & GENERAL NOTES	
8-22-02	ADDED CROSSWALK & STOPBAR DTLS.	
7-02-98	ADDED DETAILS OF STD. RAISED PAV'T. MARKERS	
4-26-96	REV. NOTES 3&4; ADDED R.P.M.	
9-30-80	DRAWN	1-9-30-80
DATE	REVISION	FILMED

ARKANSAS STATE HIGHWAY COMMISSION

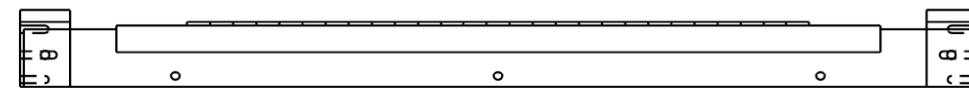
PAVEMENT MARKING DETAILS

STANDARD DRAWING PM-1

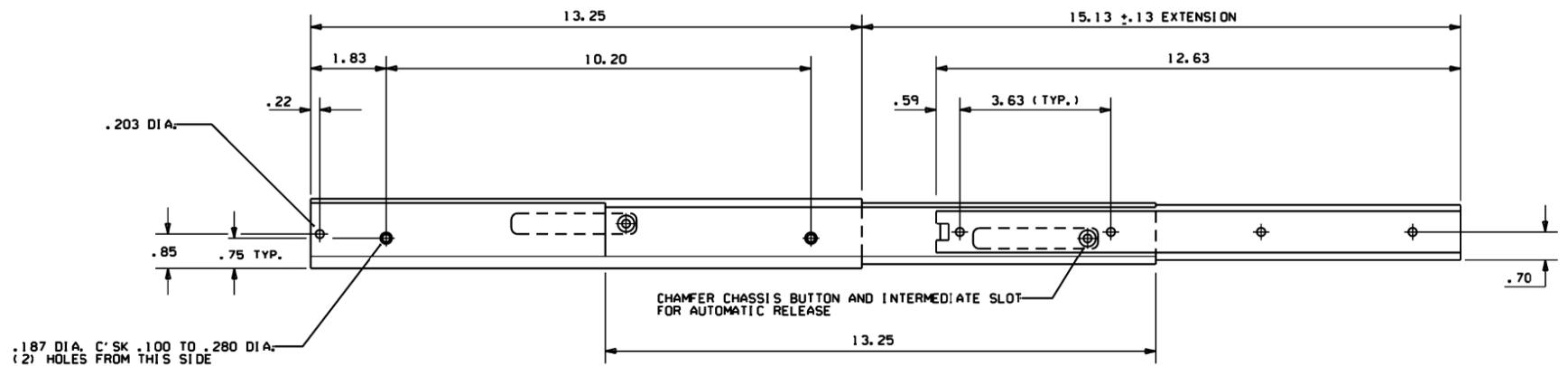
DRAWER PLAN VIEW



- NOTES:
 1. RIGHT HAND SLIDE SHOWN, LEFT SLIDE OPPOSITE.
 2. GENERAL DEVICES (CC3002-99-0102) OR EQUAL AND CONTAINS (1) RIGHT HAND SLIDE ASSEMBLY, (1) LEFT HAND SLIDE ASSEMBLY.
 3. ALL HARDWARE NECESSARY TO FASTEN SLIDE ASSEMBLY TO UNDERSIDE OF CONTROLLER SHELF SHALL BE INCLUDED.



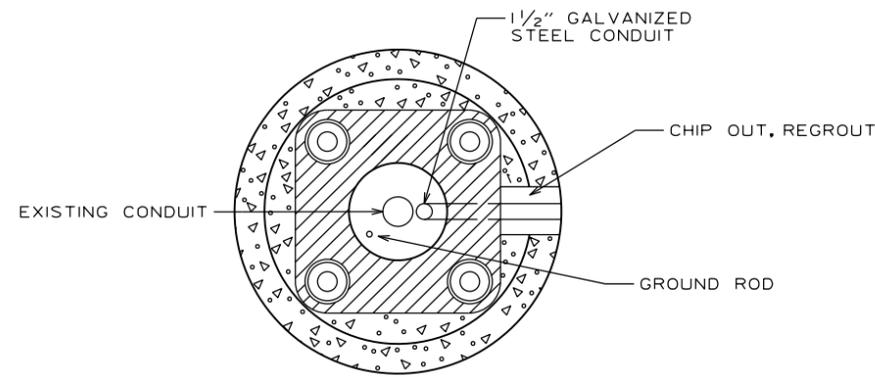
FRONT VIEW



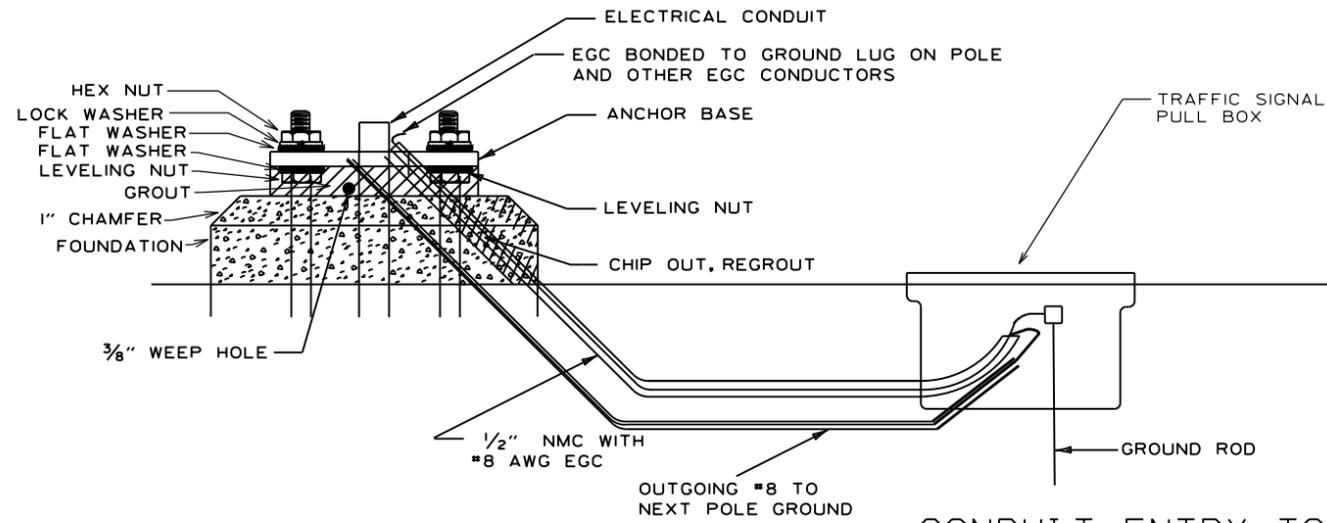
RIGHT SIDE ASSEMBLY

			ARKANSAS STATE HIGHWAY COMMISSION
			CONTROLLER CABINET UTILITY DRAWER
9-12-13	ISSUED AS STANDARD DRAWING		
6-15-05	ISSUED		
DATE	REVISION	DATE FILED	STANDARD DRAWING SD-5

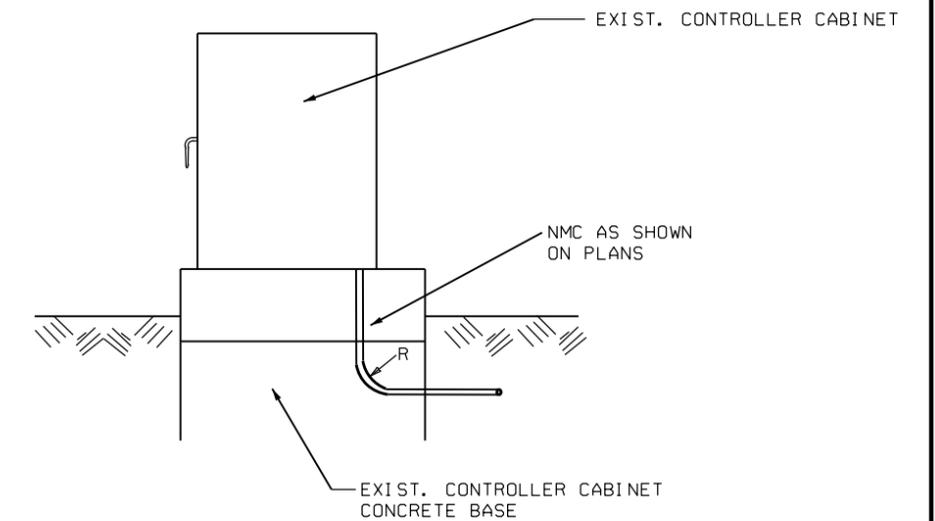
CONDUIT ENTRY TO EXISTING POLE BASE



ANCHOR BASE

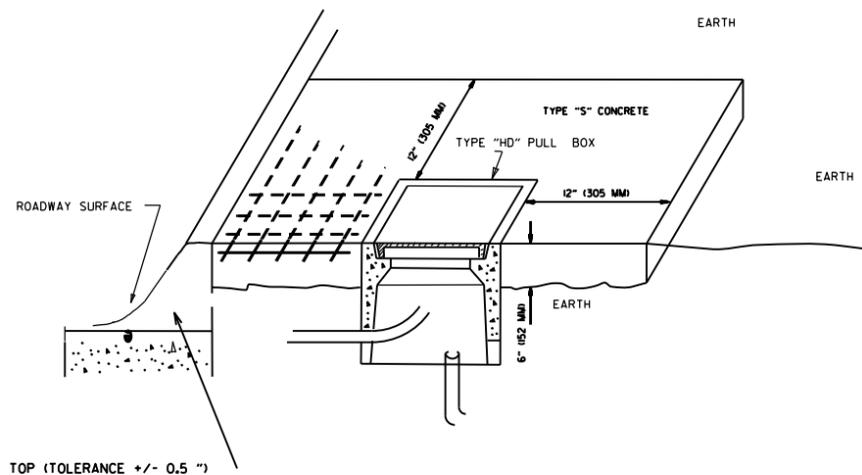


CONDUIT ENTRY TO EXISTING CONTROLLER CABINET



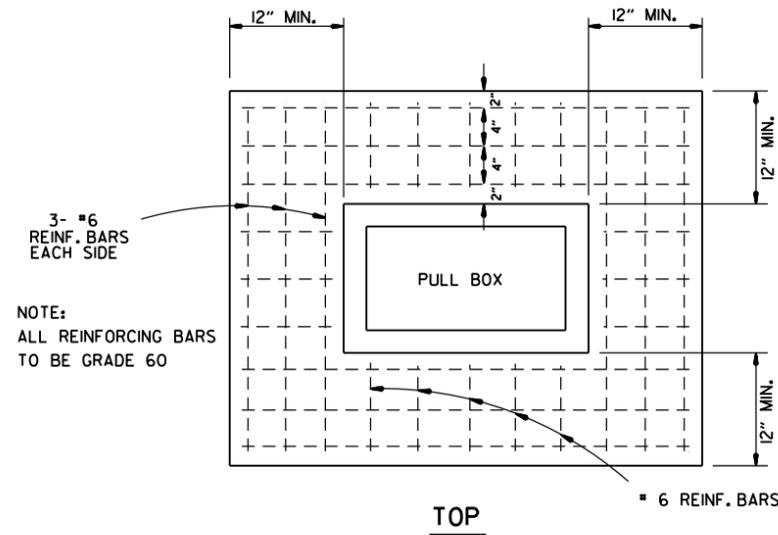
NOTE: ENTRY TO CABINET SHALL BE THROUGH A CUT IN THE BASE SUFFICIENT TO PROVIDE ADEQUATE CONDUIT RADIUS FOR ITEM.

TYPE "HD" CONCRETE PULL BOX DETAIL



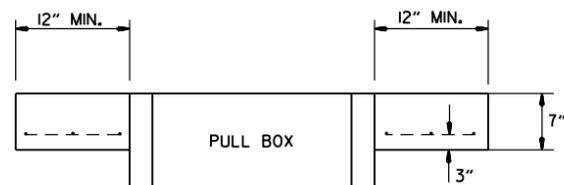
2" CLEAR FROM TOP (TOLERANCE +/- 0.5 ")

NOTE: ALL TYPE 1 AND TYPE 2 HD PULL BOXES ARE INSTALLED WITH AN APRON OF CONCRETE 12" (305 MM) WIDE AND 7" (178 MM) IN DEPTH. ALL PAYMENT SHALL BE INCLUDED IN THE PRICE OF THE TYPE HD PULL BOX. PULL BOX SHALL BE INSTALLED FLUSH TO SURROUNDING GRADE UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER. THE CONCRETE SHALL BE CLASS "S". THREE #6 REINFORCING BARS IN THE APRON ON ALL SIDES OF THE PULL BOX IS REQUIRED IN CONCRETE.



NOTE: ALL REINFORCING BARS TO BE GRADE 60

TOP



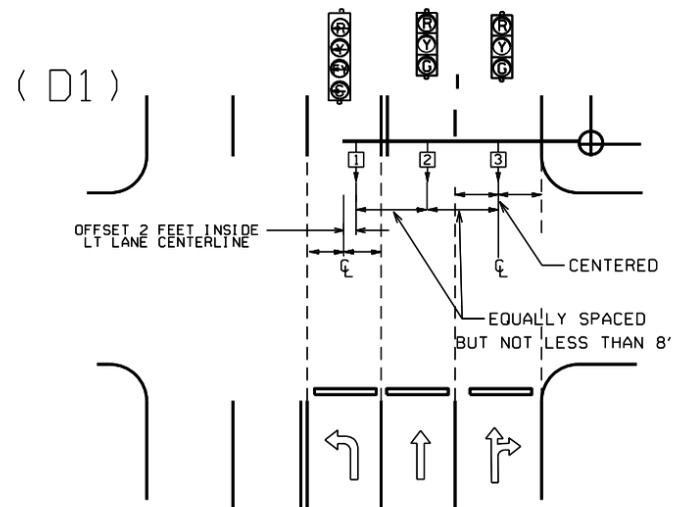
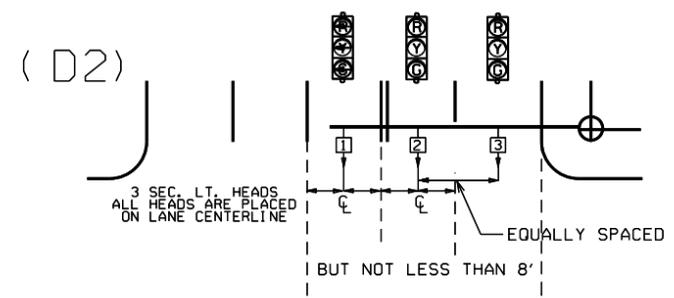
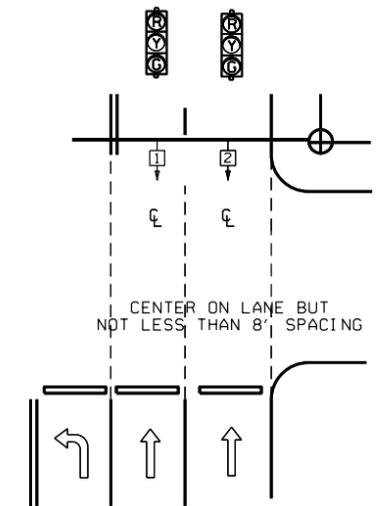
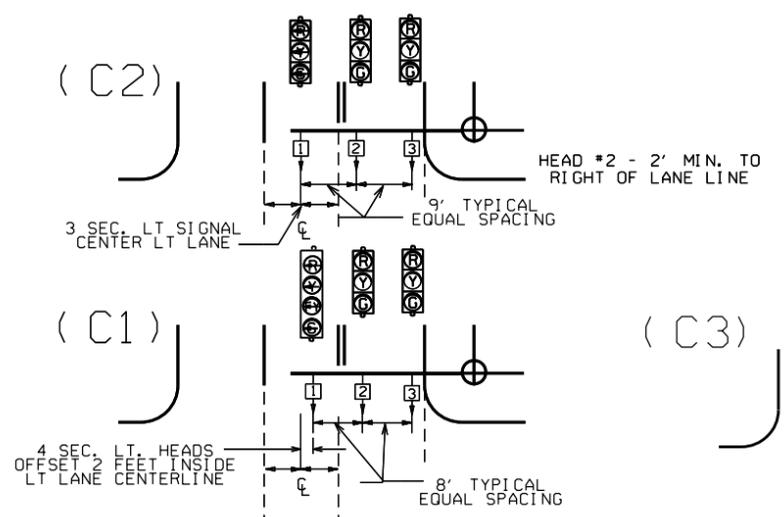
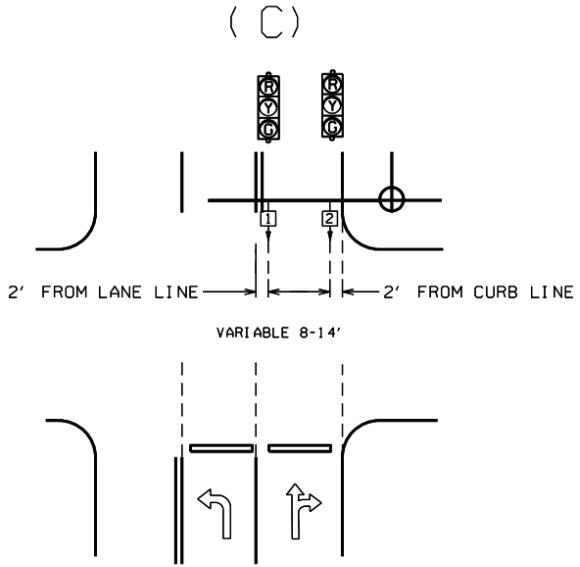
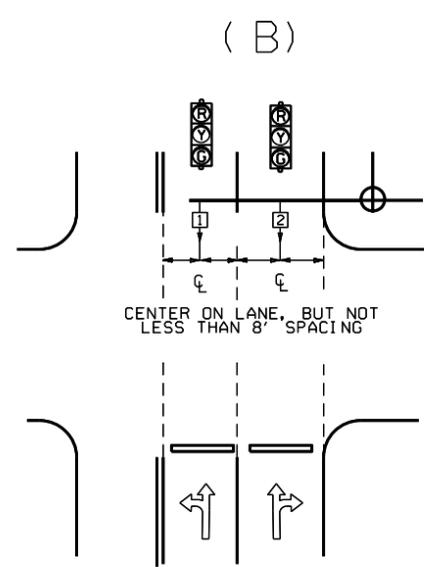
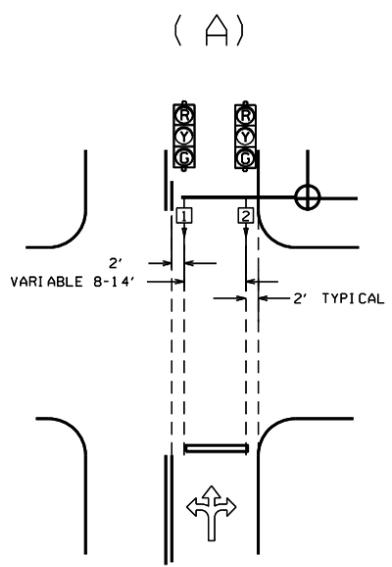
ELEVATION

DATE	REVISION	DATE FILM
9-2-15	REVISED PULL BOX DEPTH	
9-12-13	ISSUED AS STANDARD DRAWING	
5-21-09	REVISED GROUNDING	
7-31-08	ADDED & REVISED CONDUIT ENTRY	
6-23-04	REVISED CLEARANCE AT CURB ENTRY	
1-4-02	ADDED REINFORCING TO BOX APRON	
7-2-01	REVISED	
12-27-99	REVISED NOTES	
11-18-98	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

HEAVY DUTY PULL BOX

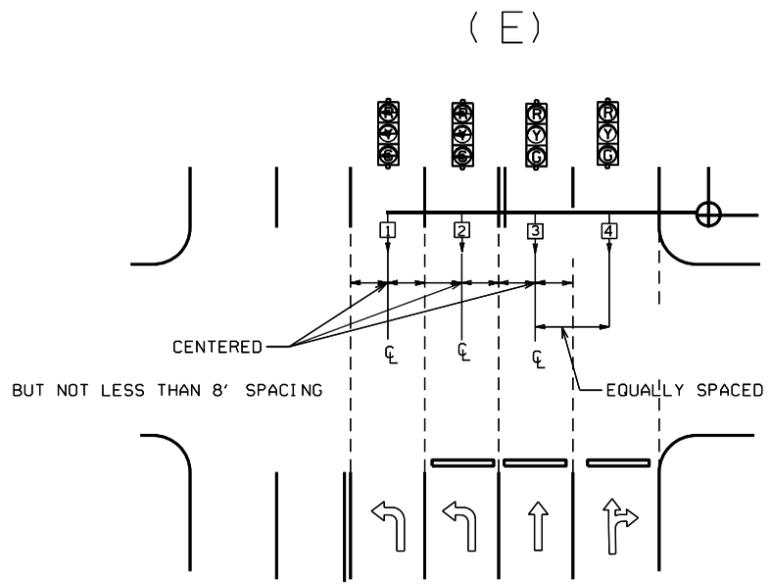
STANDARD DRAWING SD-6



NOTE: WHERE LEFT TURN HEAD (HEAD 1 ON D1 AND D2) IS NOT CALLED FOR ON PLANS, MAST ARM LENGTH MAY STILL BE ALLOWED FOR FUTURE INSTALLATION. HEADS FOR THROUGH MOVEMENTS SHALL STILL BE ALIGNED WITH THROUGH LANES AS SHOWN ON DETAILS.

GENERAL NOTES:

- FOUR SECTION "PROTECTED/PERMISSIVE" LEFT TURN HEADS SHOULD BE PLACED A MINIMUM OF TWO (2') FEET TO THE RIGHT OF THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.
- THREE SECTION "PROTECTED" LEFT TURN HEADS SHOULD BE PLACED ON THE CENTERLINE OF THE APPROACHING LEFT TURN LANE.
- WHEN IT IS NECESSARY TO PLACE POLES OTHER THAN AS SHOWN ON PLAN SHEET(S) RESULTING IN MAST ARM EXTENDING MORE THAN TWO FEET PAST (TO THE LEFT OF) THE CENTERLINE OF THE APPROACHING LEFT TURN LANE, MAST ARM SHALL BE CUT TO APPROPRIATE LENGTH AS DETERMINED BY THE ENGINEER, AND A NEW END CAP PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THIS PRIOR TO INSTALLING THE MAST ARM IF ADDITIONAL COMPENSATION IS REQUIRED.
- SIGNAL HEAD SPACING SHALL, IN NO CASE, BE LESS THAN EIGHT (8') FEET BETWEEN HEADS ON CENTER, MEASURED HORIZONTALLY PERPENDICULAR TO THE APPROACH.
- ALL SIGNAL HEADS SHOWN ON THIS DETAIL SHEET SHALL BE LOCATED ACCORDING TO THE DIMENSIONS SHOWN IN RELATION TO THE APPROACH SIDE OF THE INTERSECTION.
- MAXIMUM MOUNTING HEIGHT OF SIGNAL FACES LOCATED BETWEEN 40 FEET AND 53 FEET FROM STOP BAR SHALL BE IN ACCORDANCE WITH FIGURE 4D-5 OF 2009 MUTCD.



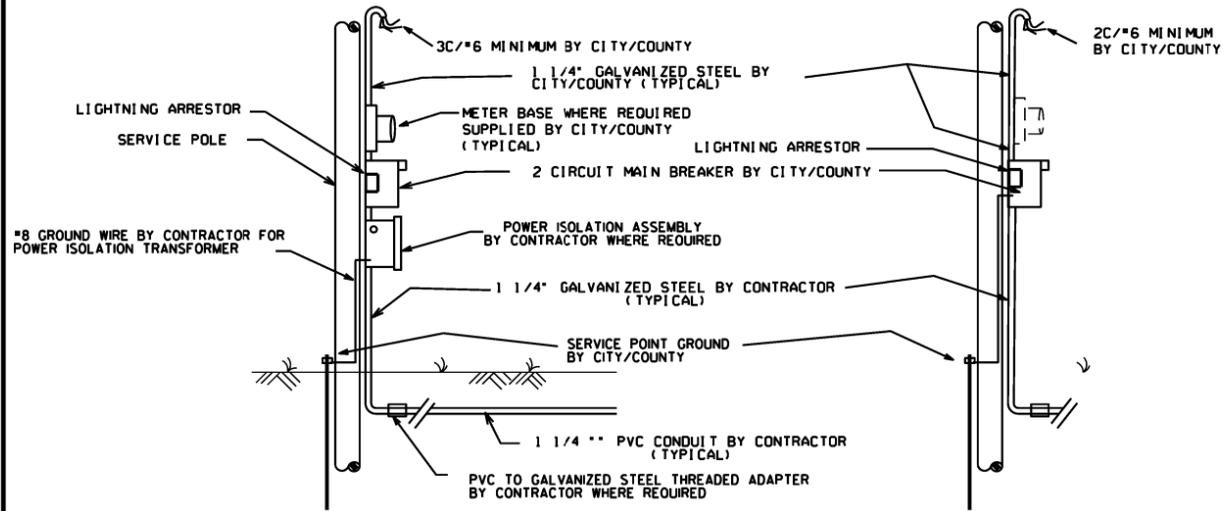
CL = CENTER OF LANE FROM APPROACH SIDE

12-8-16	REVISED NOTE 6		ARKANSAS STATE HIGHWAY COMMISSION
9-12-13	ISSUED AS STANDARD DRAWING		SIGNAL HEAD PLACEMENT
3-11-10	2009 MUTCD		STANDARD DRAWING SD-8
12-9-99	ISSUED		
DATE	REVISION	DATE FILM	

MAIN BREAKER NOT NEAR CONTROLLER CABINET SECONDARY REQUIRED

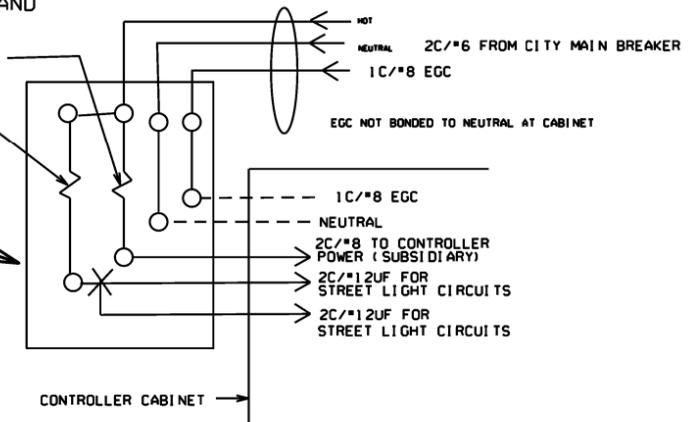
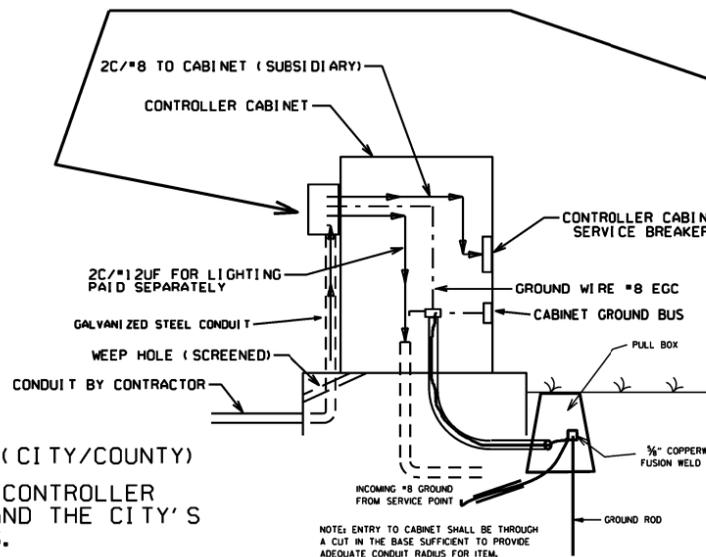
WITH POWER ISOLATION ASSEMBLY

WITHOUT POWER ISOLATION ASSEMBLY



GROUND ROD-A 10' X 3/4" GROUND ROD SHALL BE INSTALLED IN THE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 701. THE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

SECONDARY BREAKER BY CONTRACTOR (SUBSIDIARY)



MAIN BREAKER WIRING (TYPICAL)

NOTES TO CONTRACTOR AND AGENCY RESPONSIBLE FOR MAINTENANCE OF THE INTERSECTION (CITY/COUNTY)

ELECTRICAL SERVICE TYPICALLY FALLS INTO TWO CATEGORIES: MAIN BREAKER NEAR CONTROLLER CABINET; AND MAIN BREAKER NOT NEAR CONTROLLER CABINET. THE CONTRACTOR'S AND THE CITY'S OR COUNTY'S RESPONSIBILITY VARIES ACCORDINGLY AS INDICATED ON THESE DETAILS.

1. ALL SITUATIONS: ELECTRICAL SERVICE SHALL BE PROVIDED BY THE CITY/COUNTY TO A SERVICE POLE WITH EXTERNAL RAIN TIGHT BREAKER (MAIN BREAKER) AT A MUTUALLY ACCEPTABLE POINT WITHIN THE RIGHT-OF-WAY. SERVICE POINT INCLUDES GALVANIZED STEEL CONDUIT TO A POINT 18" BELOW GROUND LINE, TWO CIRCUIT MAIN BREAKER, LIGHTNING ARRESTOR, POWER ISOLATION ASSEMBLY WHERE REQUIRED, METER LOOP IF REQUIRED BY LOCAL UTILITY, ELECTRICAL CONDUCTORS AND WEATHERHEAD. WHERE STREET LIGHTING IS INCLUDED AS PART OF SIGNAL INSTALLATION, STREET LIGHTING CIRCUIT (2C/#12 AWG UF RATED, TYPICAL) SHALL BE KEPT SEPARATE FROM THE CIRCUIT SERVING TRAFFIC SIGNAL. SERVICE WIRE AND WIRING FROM THE CONTROLLER TO MAIN BREAKER IS PROVIDED BY THE CONTRACTOR AS A PART OF THIS CONTRACT. WIRE AND WIRING FROM MAIN BREAKER, AND CONNECTION TO THE UTILITY IS THE RESPONSIBILITY OF THE CITY/COUNTY.

2. MAIN BREAKER NOT NEAR CONTROLLER CABINET: THE MAIN BREAKER ASSEMBLY, GALVANIZED STEEL CONDUIT, WEATHERHEAD AND WIRE ABOVE MAIN BREAKER AND CONNECTION TO THE UTILITY SHALL BE PROVIDED BY CITY/COUNTY. CONTRACTOR SHALL PROVIDE AS PART OF CONTRACT SECONDARY BREAKER, CONDUIT, WIRE AND WIRING TO THE MAIN BREAKER.

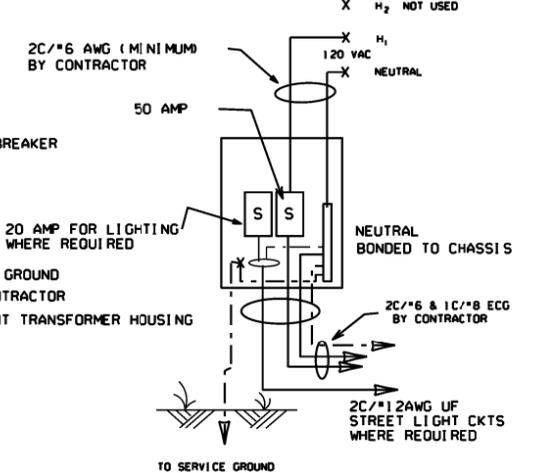
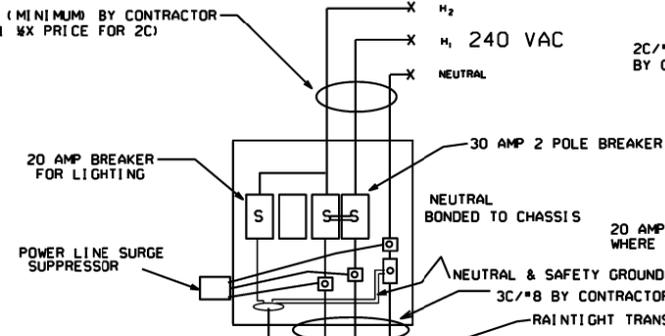
3. MAIN BREAKER NEAR CONTROLLER CABINET: ALL COMPONENTS OF THE SERVICE POINT WITH THE EXCEPTION OF THE WIRE AND WIRING ABOVE THE MAIN BREAKER IS FURNISHED AND INSTALLED BY THE CONTRACTOR. WIRING FROM MAIN BREAKER INCLUDING CONNECTION TO THE UTILITY, IS THE RESPONSIBILITY OF THE CITY/COUNTY. IF METER LOOP IS REQUIRED, METER BASE AND HARDWARE IS PROVIDED BY THE CITY/COUNTY AND INSTALLED BY THE CONTRACTOR.

SERVICE GROUND IS TYPICALLY TIED TO NEUTRAL AT THE MAIN BREAKER. AS SUCH, CONTROLLER GROUND IS NOT TIED TO NEUTRAL AT SECONDARY BREAKER OR IN CONTROLLER CABINET.

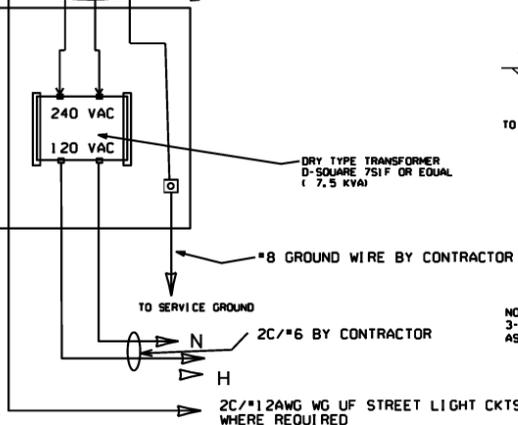
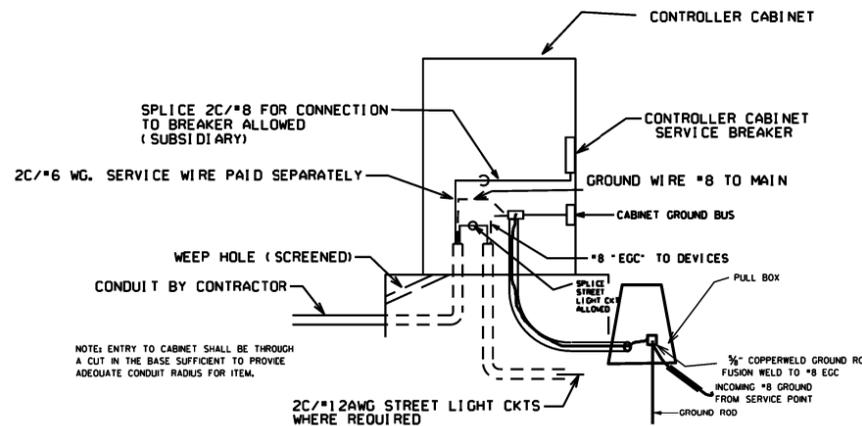
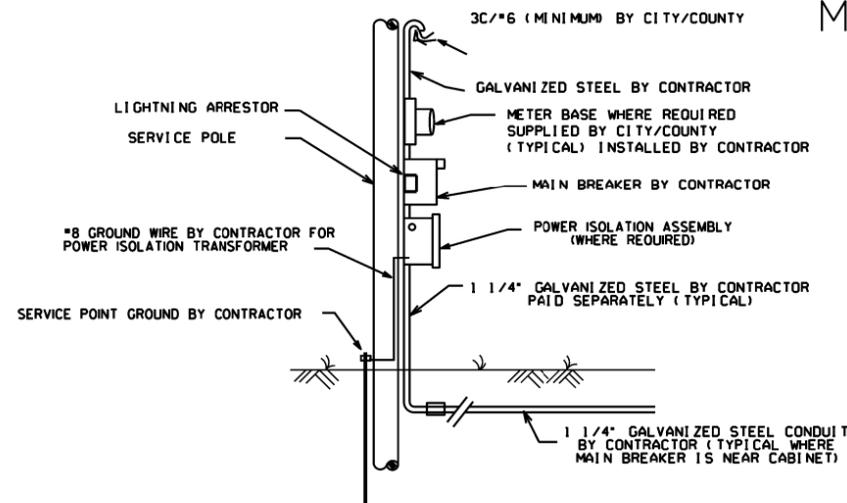
WITH POWER ISOLATION ASSEMBLY
4 CIRCUIT MAIN BREAKER

WITHOUT POWER ISOLATION ASSEMBLY
2 CIRCUIT MAIN BREAKER

3C/#6 AWG (MINIMUM BY CONTRACTOR (PAID AT 1 1/2 X PRICE FOR 2C))



MAIN BREAKER NEAR CONTROLLER CABINET SECONDARY NOT REQUIRED



NOTE: ELECTRICAL GROUND CONDUCTOR (EGC) ADDED 3-3-2003, CONSISTING OF A 1C/#8AWG CU GREEN WIRE AS PER NATIONAL ELECT. CODES.

DATE	REVISION	DATE FILM
9-12-13	ISSUED AS STANDARD DRAWING	
4-18-13	ADDED LIGHTNING ARRESTOR	
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
3-3-03	ADDED EGC NOTE	
9-26-01	REVISED	
12-27-99	REVISED	
7-28-99	REVISED	
2-5-99	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION

SERVICE POINT

STANDARD DRAWING SD-9

NOTES, PED AND TRAFFIC SIGNAL HEAD SIGNS:
EACH ITEM *TRAFFIC SIGNAL HEAD (4 SEC., 1-WAY)* SHALL INCLUDE A SPECIAL SIGN AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD UNLESS REMOVED WITHIN THE SIGNAL PLAN NOTES.

EACH ITEM *TRAFFIC SIGNAL HEAD (3 SEC., 1-WAY)* TO BE USED AS A LEFT TURN INDICATION ONLY SHALL INCLUDE A SIGN (R10-10) AS SHOWN, ATTACHED TO THE MAST ARM OR SPAN ASSEMBLY 12" TO THE RIGHT OF THE SIGNAL HEAD.

EACH PEDESTRIAN PUSHBUTTON SHALL HAVE ONE R10-3E SIGN ATTACHED TO THE POLE ABOVE THE BUTTON. ALL SIGNS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 723 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

ALL SIGN BLANKS SHALL BE CONSTRUCTED OF ALUMINUM ALLOY (ASTM DESIGNATION B-209, ALLOY 5052-H38) WITH THICKNESS OF 0.100 INCH.

GENERAL NOTES:

1. MAST ARM POLES SHALL BE MOUNTED A MINIMUM OF 4 FT. BEHIND CURB OR SHOULDER.

2. OCTAGONAL POLES AND ARMS MEETING THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS CAN BE INSTALLED IN LIEU OF ROUND. ALL POLES AND ARMS IN A JOB MUST BE THE SAME SHAPE.

3. MINIMUM STRUCTURAL REQUIREMENTS: DESIGN SPECIFICATIONS: AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 4TH EDITION (2001) WITH 2003 AND 2006 INTERIMS.

USE FATIGUE CATEGORY I FOR ALL STRUCTURES ON ROUTES WHERE THE SPEED LIMIT IS 65 MPH AND GREATER AT THE STRUCTURE LOCATION AND ON ROUTES WHERE SPEED LIMIT IS GREATER THAN 45 MPH WITH AN ARM 60' OR LONGER.

USE FATIGUE CATEGORY II FOR STRUCTURES ON ROUTES WITH A SPEED LIMIT LESS THAN 65 MPH AND GREATER THAN 45 MPH WITH ARMS LESS THAN 60' AND ROUTES WITH SPEED LIMITS OF 45 MPH AND LESS WITH AN ARM 60' OR LONGER.

USE FATIGUE CATEGORY III FOR ALL STRUCTURES WHERE SPEED LIMIT IS 45 MPH AND LESS AND ARMS LESS THAN 60'.

CONSTRUCTION SPECIFICATIONS: ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (CURRENT EDITION) WITH APPLICABLE SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

BASE WIND SPEED: 90 MPH.

STEEL MEMBERS CONSIDERED MAIN CARRYING MEMBERS WITH A THICKNESS GREATER THAN 1/2" SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TEST SPECIFIED IN SUBSECTION 807.05 OF THE STANDARD SPECIFICATIONS.

DEAD LOAD: AS A MINIMUM, DESIGN SHALL BE BASED ON THE FIXED ATTACHMENTS SHOWN BELOW OR AS MODIFIED IN THE PLANS.

ALL SIGNAL HEADS TO BE ONE WAY, 12 INCH, AND HAVE 5 IN. BACK PLATES:

HEADS AT END OF ARM - ONE 4 SEC., 85 LB., 16.0 SQ. FT. ONE SIGN MOUNTED 3 FT. FROM SIGNAL * 2' X 0' X 2' * 6', 20 LB. REMAINING HEADS SPACED A 8 FT. * 3 SEC., 56 LB., TWO 5 SEC.; 14.4 SQ. FT. DESIGN TO ACCOMMODATE (INCLUDING 2 HEADS FOR ARMS 10 TO 16 FT.; INCLUDING LB. 2 HEADS FOR ARMS 10 TO 16 FT.; INCLUDING LB. 3 HEADS FOR 18 TO 24 FT. ARMS; 4 HEADS FOR OVER 26 FT. ARMS.

STREET NAME SIGN -- 72" X 18", MOUNTED SUCH THAT OUTSIDE EDGE IS NOT GREATER THAN 12 FT. FROM POLE. DEPENDING UPON POSITION OF SIGNAL HEAD ADJACENT TO POLE, SIGN MAY OVERLAP POLE SHAFT ROADWAY LUMINAIRES (WHERE REQUIRED ON PLAN SHEET) * VARIABLE ARM LENGTH (MAX.), 3.3 SQ. FT., 75 LB. PED SIGNALS -- TWO 2 SEC. 12 INCH MOUNTED 8 FT. FROM BASE OF POLE. POST MOUNTED 3 SEC. SIGNAL HEAD AT 10 FT. ON SIDE OF POLE.

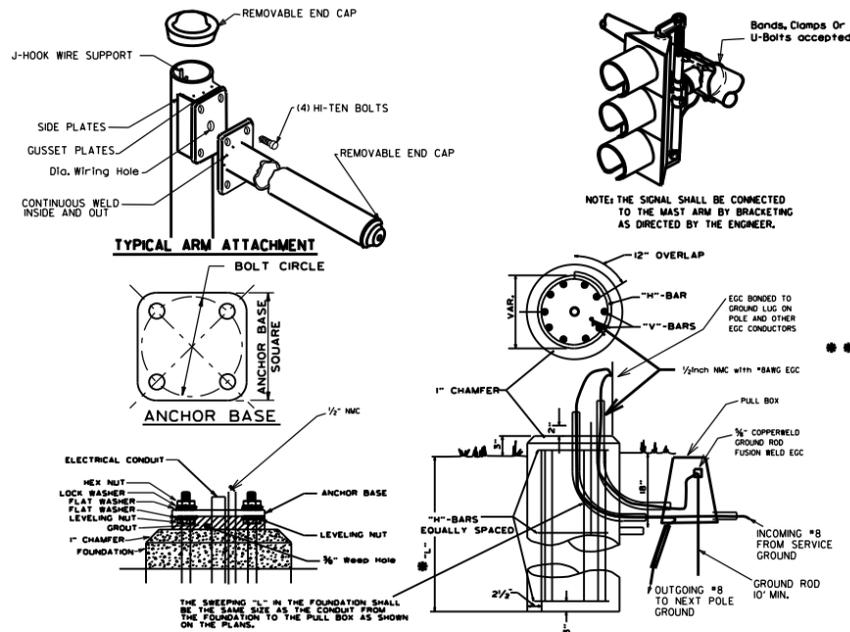
4. POLE/MAST ARM CAP -- POLE AND MAST ARMS CAPS SHALL BE PROVIDED, FABRICATED OF EITHER STEEL OR CAST ALUMINUM.

5. HAND HOLE -- HAND HOLES SHALL BE 4 X 6 INCHES FOR STANDARD, AND 3 X 5 INCHES FOR PED POLES, MINIMUM PLACED APPROXIMATELY 12 INCHES FROM BASE, AND SHALL BE FIXED WITH A BOLT DOWN COVER. A VACUUM FORMED ABS COVER IS AN ACCEPTABLE ALTERNATE TO STEEL. POLES GREATER THAN 21 FT. IN HEIGHT (FOR ROADWAY LUMINAIRE ATTACHMENT) SHALL INCLUDE A HAND HOLD WITHIN 12 INCHES OF MAST ARM(S) ATTACHMENT(S).

6. POLE/MAST ARM TAPER AND SLOPE - AVERAGE TAPER OF SIGNAL ARMS AND POLE SHALL BE 0.125 TO 0.15 INCHES PER FT.

MAST ARM CENTERLINE ANGLE AT ATTACHMENT POINT WITH POLE SHALL MAINTAIN NOT LESS THAN 0.5 DEGREES OR MORE THAN 4 DEGREES POSITIVE SLOPE WITH A LINE PERPENDICULAR TO THE POLE CENTERLINE. THE ARM SHALL MAINTAIN A POSITIVE AFTER IT IS PLACED UNDER LOAD.

7. NUT COVERS - EACH POLE SHALL INCLUDE A BOLT DOWN NUT COVER FOR EACH ANCHOR BOLT.

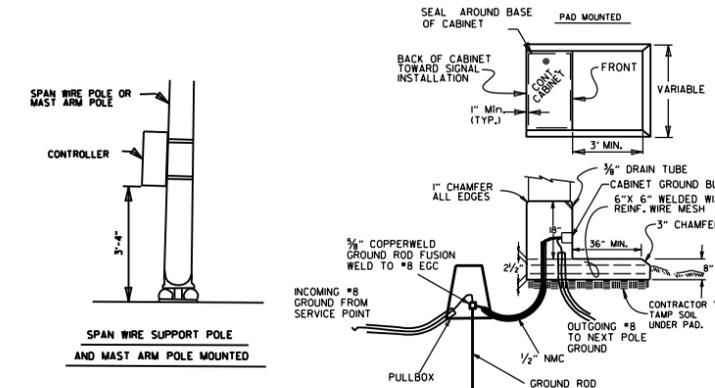


THE GROUND ROD SHALL BE FUSION WELDED TO A 1/2" A.W.G. SOLID COPPER GROUND WIRE. ATTACHMENT TO THE PRIMARY GROUND MAY BE BY AN APPROVED CLAMP. THE ROD IS TO BE LOCATED IN THE CONCRETE PULL BOX.

TYPICAL FOUNDATION DETAILS

POLE FOUNDATION MINIMUM DIMENSIONS AND STEEL REINFORCING. ALL REINFORCING STEEL SHALL BE GRADE 40 MIN.

ARM LENGTH	FDN. DIAMETER	DEPTH * L' *	STEEL		
			VERT.	HORZ.	O/C.
PED	30"	7'-0"	12-#7 (6'-6")	10-#4	8.44'
2' to 12'	30"	10'-6"	12-#7 (10'-0")	15-#4	8.42'
over 12' to 20'	30"	11'-6"	12-#7 (11'-0")	16-#4	8.66'
over 20' to 35'	36"	12'-6"	13-#8 (12'-0")	17-#4	8.88'
over 35' to 50'	36"	13'-6"	13-#8 (13'-0")	19-#4	8.56'
over 50' to 72'	42"	14'-6"	18-#8 (14'-0")	20-#4	8.74'
Twins to 20'	30"	16'-0"	12-#6 (15'-6")	22-#4	8.76'
Twins over 20' to 44'	36"	16'-0"	13-#8 (15'-6")	22-#4	8.76'
Twins over 44' to 50'	42"	16'-0"	18-#8 (15'-6")	22-#4	8.76'
Twins over 50' to 72'	42"	16'-6"	18-#8 (16'-0")	23-#4	8.64'



CONTROLLER CABINET MOUNTING DETAILS

UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CABINET ORIENTATION SHALL BE SUCH THAT THE BACK OF THE CABINET IS PARALLEL TO THE STREET AND POSITIONED TO ALLOW VISIBILITY OF THE SIGNAL DISPLAY WHILE OBSERVING THE CONTROLLER FRONT PANEL.

8. GROUND ROD - A 10' X 5/8" GROUND ROD SHALL BE INSTALLED IN THE PULL BOX FOR EACH POLE AND THE CONTROLLER. PAYMENT FOR THE GROUND ROD AND 1/2" NMC SHALL BE INCLUDED IN ITEM 714 FOR SIGNAL POLES AND ITEM 701 FOR THE CONTROLLER. THE PULL BOX AND CONDUCTOR BOX SHALL BE PAID FOR SEPARATELY.

9. POLE BASE/FOUNDATION - ANCHOR BOLTS SHALL INCLUDE AS A MINIMUM, ONE LEVELING NUT, TWO FLAT WASHERS, ONE LOCK WASHER, AND ONE HEX. NUT, PERIMETER OF ANCHOR BASE SHALL BE GROUDED WITH A 1/4" WEEP HOLE. ALL CONCRETE SHALL BE CLASS 'S' OR GREATER.

10. CONCRETE - ALL CONCRETE FOR CONTROLLER CABINET AND POLE FOUNDATIONS SHALL BE CLASS 'S' OR GREATER.

11. PEDESTRIAN PHASES - PEDESTRIAN MOVEMENTS SHALL BE PUSH BUTTON ACTUATED AND CONCURRENTLY TIMED, UNLESS OTHERWISE INDICATED ON THE PLAN SHEET(S). FURNISHING AND INSTALLING PED PUSH SWITCH SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM PEDESTRIAN SIGNAL HEAD.

SIGNAL OPERATION NOTES:

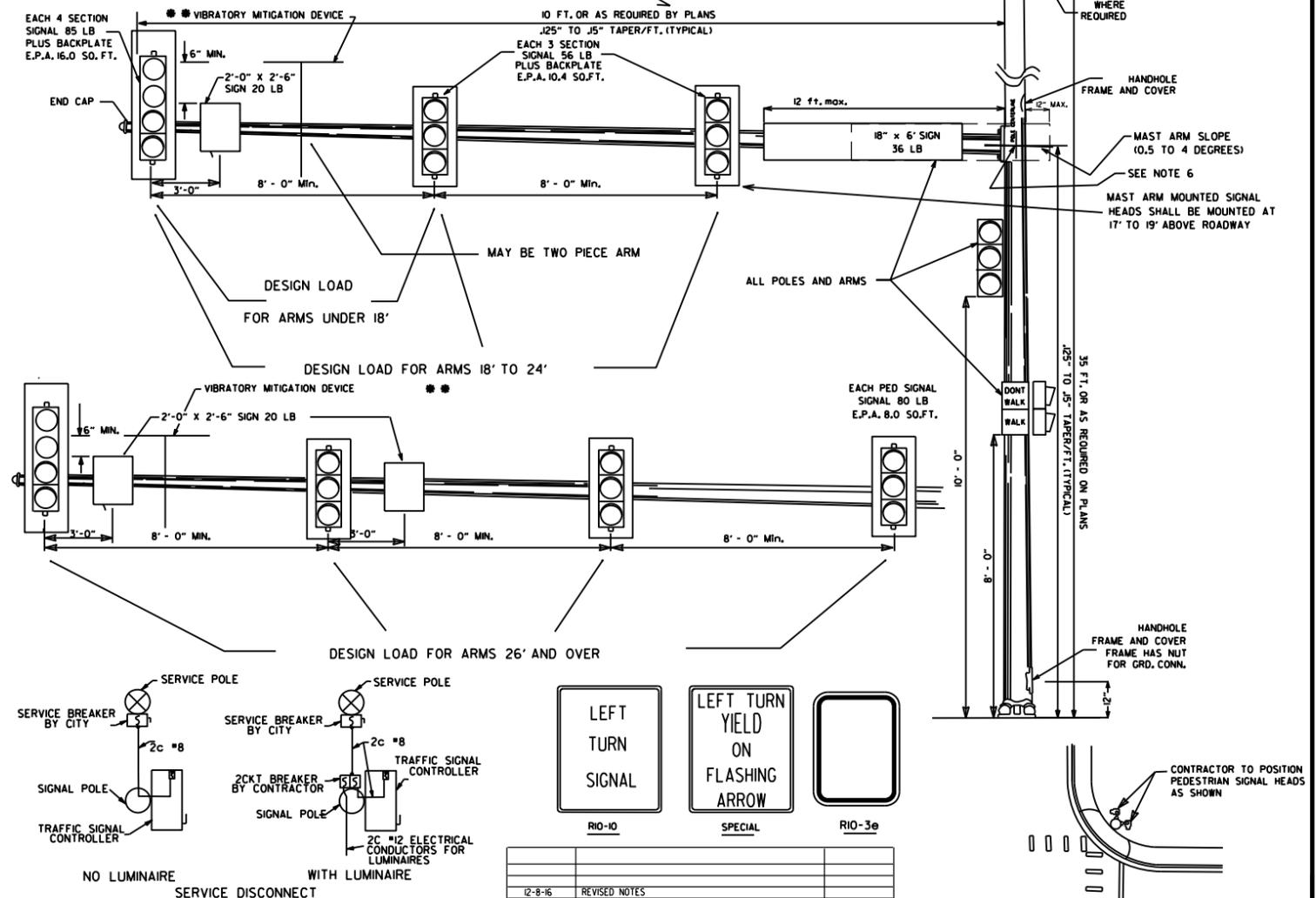
FLASHING OPERATION - PRIOR TO NORMAL OPERATION, SIGNAL SHALL BE FLASHED FOR A PERIOD OF 3 TO 5 WORK DAYS OR AS DIRECTED BY THE ENGINEER. SIGNAL SHALL BE PLACED IN OPERATION ONLY ON A REGULAR WORK DAY, EXCEPT FRIDAY.

THE CONTRACTOR MAY BE REQUIRED TO ALTER THE FLASHING DISPLAY DURING THE TEMPORARY FLASH PERIOD. AT THE TIME INTERSECTION IS PLACED IN PERMANENT OPERATION, THE FLASH SEQUENCE SHALL THEN BE RETURNED TO THAT INDICATED ON THE PLAN SHEETS. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED FOR THESE ALTERATIONS IN FLASH SEQUENCE.

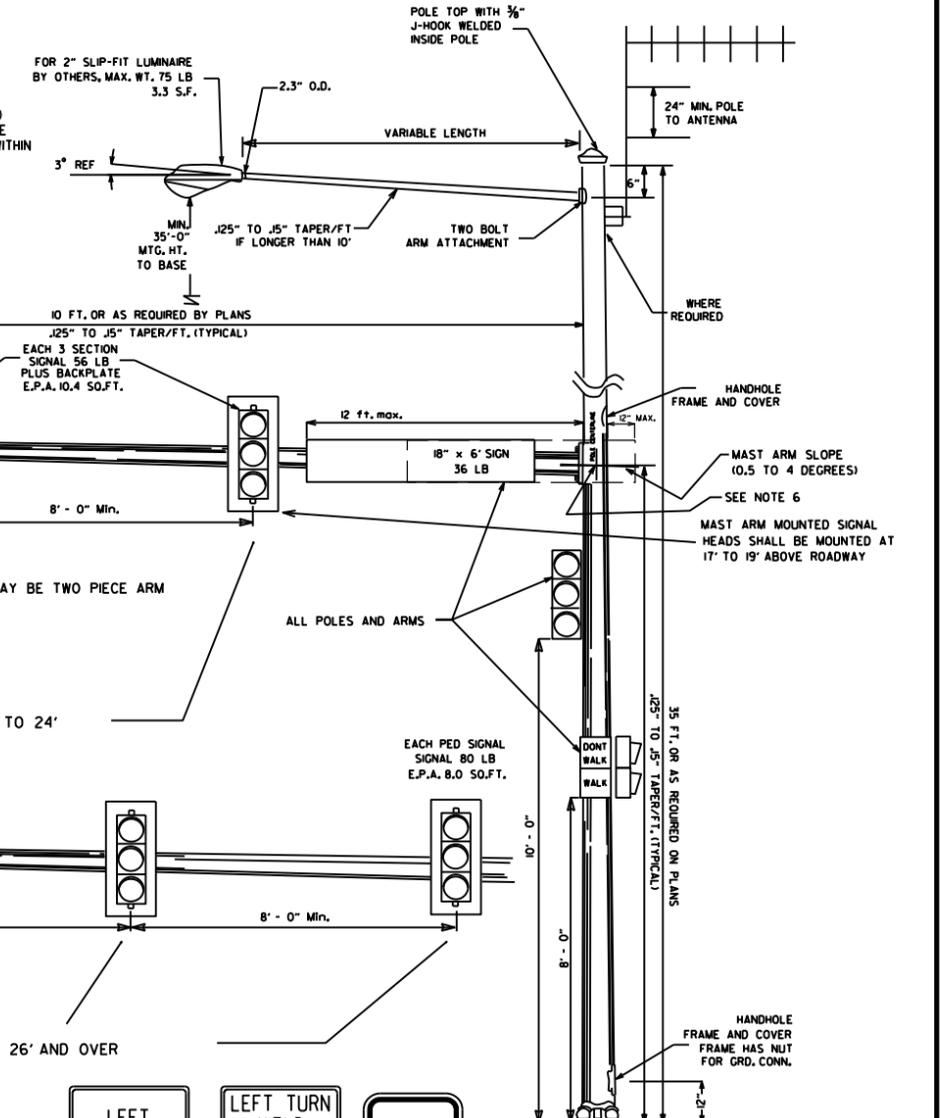
WHEN THE GROUND ELEVATION AT THE POLE IS LOWER THAN THE ROADWAY ELEVATION, THE LENGTH OF FOUNDATION ABOVE THE GROUND MAY BE INCREASED TO PROVIDE THE REQUIRED SIGNAL HEAD CLEARANCE ABOVE THE ROADWAY. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 18" OR LESS, NO INCREASE IN DEPTH "L" WILL BE REQUIRED. WHEN THE REQUIRED LENGTH OF FOUNDATION ABOVE THE GROUND IS 5'-6" OR LESS, INCREASE DEPTH "L" BY 1'-0". FOR LENGTHS GREATER THAN 5'-6", DEPTH "L" SHALL BE ADJUSTED AS DIRECTED BY THE ENGINEER. LONGITUDINAL REINFORCING, AS SHOWN IN THE TABLE, SHALL BE PROVIDED FOR THE LENGTH OF THE EXTENDED SHAFT AND #4 TIES SHALL BE PROVIDED AT A SPACING NOT TO EXCEED 9" ON CENTERS. PAYMENT WILL BE IN ACCORDANCE WITH SECTION 714 OF THE STANDARD SPECIFICATIONS.

IN LIEU OF DESIGNING THE STRUCTURE TO RESIST PERIODIC GALLOPING, A VIBRATORY MITIGATION DEVICE MAY BE PROVIDED BY THE POLE MANUFACTURER. THE VIBRATORY MITIGATION DEVICE SHALL BE AN ANTI-GALLOPING PANEL CONSISTING OF A 60"X16"X0.125" SIGN BLANK MOUNTED NEAR THE END OF THE MAST ARM NOT TO EXCEED ONE QUARTER OF THE LENGTH OF THE MAST ARM FROM THE END OF THE MAST ARM WITH THE LONG AXIS OF THE PANEL COLLINEAR WITH THE LONG AXIS OF THE MAST ARM. THE PANEL SHOULD BE MOUNTED AT SUCH A HEIGHT AS TO PROVIDE AT LEAST 6" CLEAR FROM THE TOP OF ANY SIGNAL ASSEMBLY OR SIGN PANEL LOCATED ON THE MAST ARM WITHIN THE LENGTH OF THE ANTI-GALLOPING PANEL.

TRUCK-INDUCED GUST LOADS SHALL BE EXCLUDED FOR FATIGUE DESIGN FOR ALL STRUCTURES EXCEPT MAST ARMS MOUNTED OVER FACILITIES WITH POSTED SPEEDS OF 65 MPH OR GREATER AT THE LOCATION OF THE STRUCTURE.

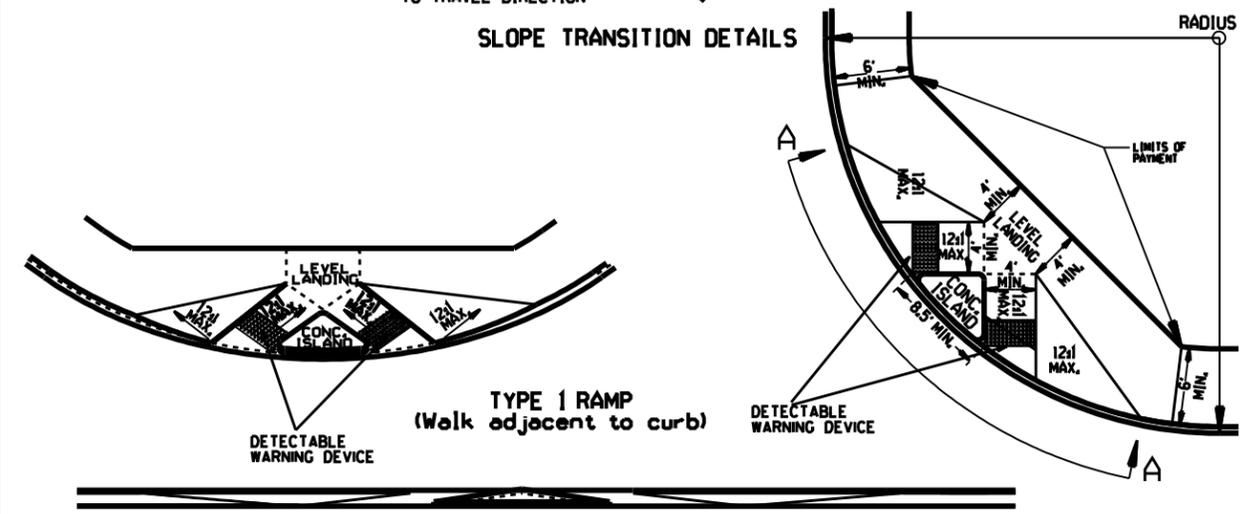
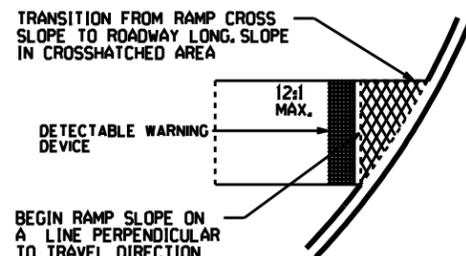
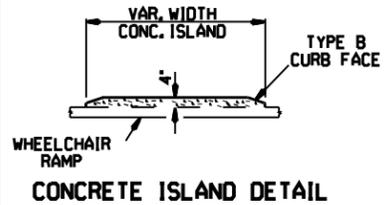


SPECIAL NOTE: 90 MPH WIND ZONE DESIGN, SEE NOTE 3. MINIMUM STRUCTURAL REQUIREMENTS.



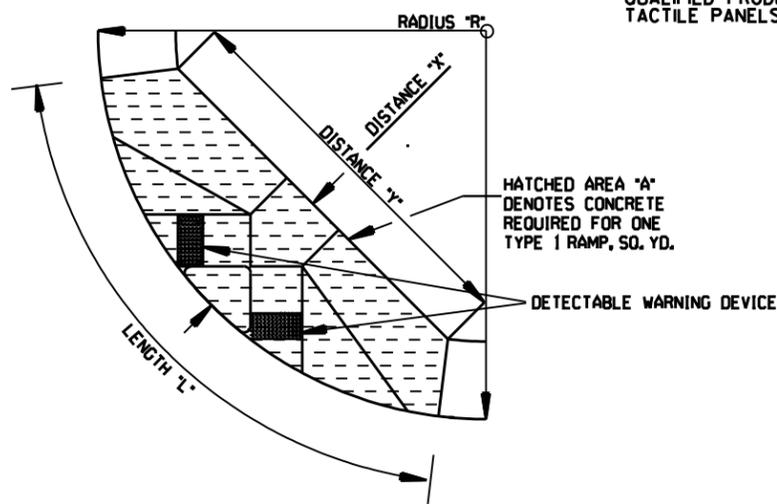
DATE	REVISION	DATE FILM
12-8-16	REVISED NOTES	
2-27-14	REVISED NOTES	
9-12-13	ISSUED AS STANDARD DRAWING	
7-21-11	REVISED VMD, SIGNAL HEADS	
5-21-09	REVISED GROUNDING	
7-31-08	REVISED GROUNDING	
4-25-08	ADDED VIBRATORY MITIGATION DEVICE & NOTES	
4-18-08	REVISED AASHTO NOTES	
4-17-08	REVISED TO 2001 AASHTO STANDARDS	
10-12-04	REVISED CABINET ORIENTATION	
6-23-04	REVISED	
5-11-04	REV. NOTE 3/AASHTO REQUIREMENTS	
6-11-01	REV. NOTES & POLE MAST ARM SLOPE	
4-11-01	REVISED POLE TAPERS	
4-25-00	REV. NOTES & SIGNAL HEAD PLACEMENT	
11-22-99	REVISED FOUNDATION DETAILS	
11-17-98	REVISED DETAILS AND NOTES	
11-21-95	ISSUED	

ARKANSAS STATE HIGHWAY COMMISSION
STEEL POLE WITH MAST ARM
STANDARD DRAWING SD-II

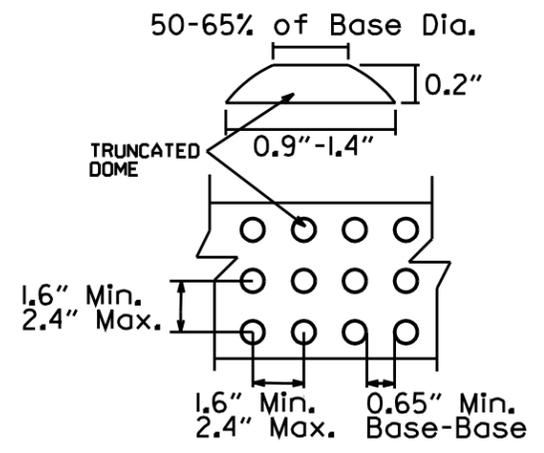


TYPE 1 RAMP DIMENSIONS AND QUANTITIES

RADIUS "R"	DISTANCE "X" FEET	DISTANCE "Y" FEET	LENGTH "L" FEET	RAMP AREA "A" SQ. YD.
15	11.67	18.82	32.18	26.21
20	11.52	22.28	35.46	30.07
25	11.43	26.60	38.77	33.80
30	11.37	30.26	40.93	36.90
35	11.33	33.51	43.11	39.77
40	11.30	36.45	45.26	42.45
45	11.27	39.16	47.34	44.97
50	11.25	41.69	49.36	47.35
55	11.24	44.07	51.31	49.63
60	11.22	46.33	53.21	51.80



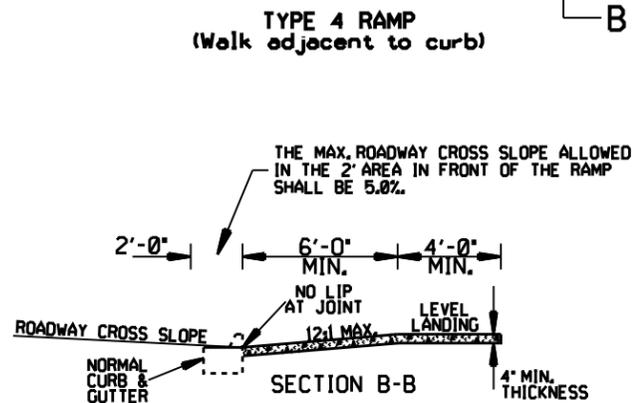
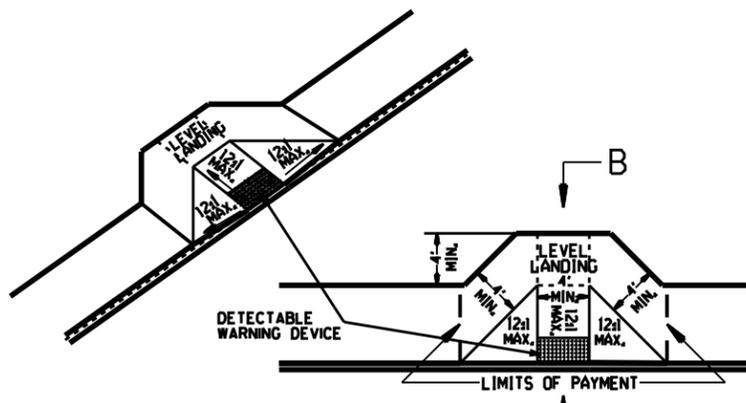
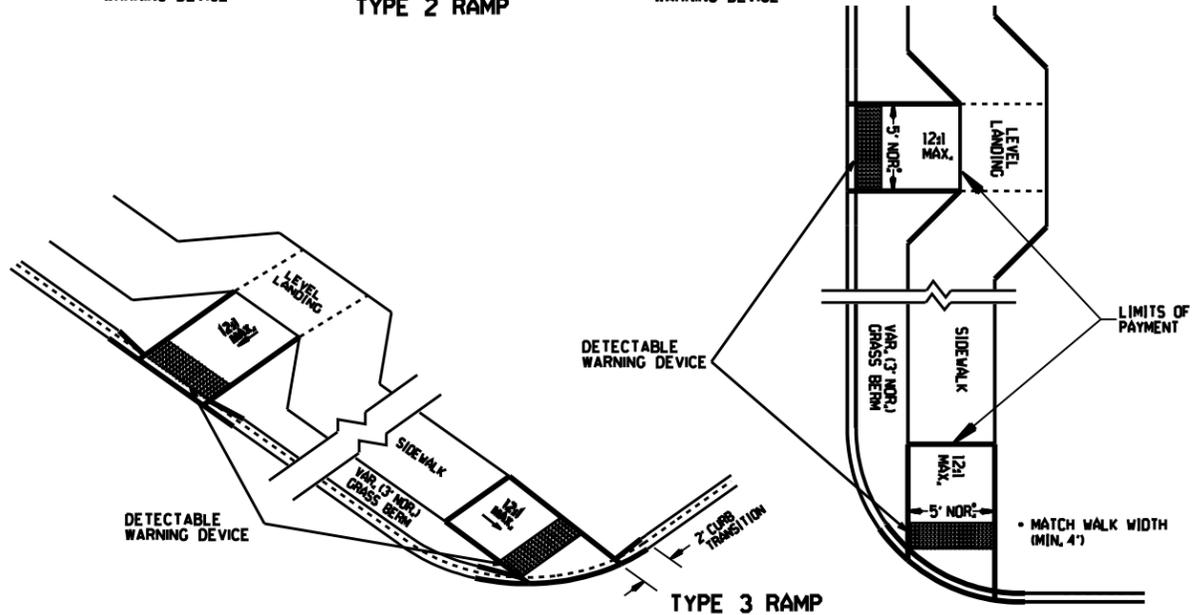
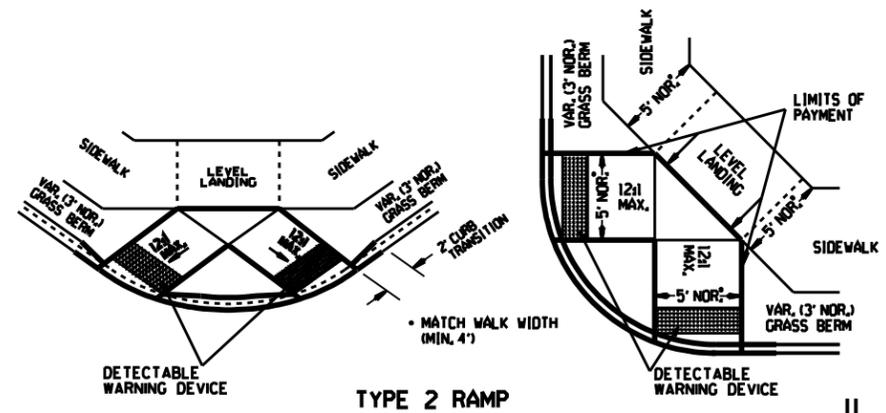
GENERAL NOTES FOR DETECTABLE WARNING DEVICES
 THE DETECTABLE WARNING DEVICE SHALL BE LOCATED SO THAT THE NEAREST EDGE OF THE DEVICE IS 6 TO 8 INCHES FROM THE FACE OF THE CURB. TRUNCATED DOMES IN THE DETECTABLE WARNING SURFACE SHALL MEET THE REQUIREMENTS OF THE GEOMETRIC CONFIGURATION SHOWN. DOMES SHALL BE ALIGNED ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES. DETECTABLE WARNING DEVICE SHALL BE 24 INCHES IN THE DIRECTION OF TRAVEL AND EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE. DETECTABLE WARNING DEVICE SHALL BE ON THE AHTD QUALIFIED PRODUCTS LIST FOR CAST-IN-PLACE TACTILE PANELS (ADA DETECTABLE WARNING).



DETECTABLE WARNING DEVICE DETAIL

GENERAL NOTES:
 IN NEW CONSTRUCTION, UNLESS OTHERWISE INDICATED ON THE PLANS, WHEELCHAIR RAMPS ARE TO BE PROVIDED AT ALL CORNERS OF CURBED STREET INTERSECTIONS AND MID-BLOCK CROSSWALK LOCATIONS. IN ALTERATIONS WHEELCHAIR RAMPS ARE TO BE PROVIDED AT CURBED STREET INTERSECTIONS WITH PEDESTRIAN TRAFFIC AND MID-BLOCK CROSSWALK LOCATIONS.
 THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1. THE SURFACE TEXTURE OF THE RAMP SHALL CONFORM TO A CLASS 6 FINISH ACCORDING TO SECTION 802.19.
 THE NORMAL GUTTER GRADE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
 ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
 THE MINIMUM THICKNESS OF THE RAMP, WALK, & LANDING SHALL BE 4". THE MINIMUM WIDTH OF THE RAMPS SHALL BE THE WALK WIDTH OR 36", WHICHEVER IS GREATER.
 RAMPS SHALL BE MODIFIED AS NECESSARY TO INSURE THAT THEY ARE PARALLEL TO A LINE DRAWN FROM THE CENTER OF ONE RAMP TO THE CENTER OF THE RAMP ON THE OPPOSITE SIDE OF THE INTERSECTION.
 THE DIMENSIONS AND QUANTITIES SHOWN ON THIS DRAWING ARE FOR A 90° INTERSECTION ONLY. DIMENSIONS AND QUANTITIES FOR SKEWED INTERSECTIONS WILL VARY, AND ARE TO BE DETERMINED BY THE ENGINEER.

NOTE:
 THE CROSS SLOPE OF THE RAMPS, LEVEL LANDINGS, AND SIDEWALKS SHALL NOT EXCEED 2.0% UNLESS REQUIRED TO MATCH STREET LONGITUDINAL GRADE.



RAMP SELECTION CRITERIA

CHOICE	TYPE	DESCRIPTION
FIRST CHOICE	TYPE 1	CORNER LOCATIONS WITH THE WALK ADJACENT TO THE CURB (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 2	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE INSUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 3	CORNER LOCATIONS WITH THE WALK OFFSET FROM THE CURB A DISTANCE SUFFICIENT TO ALLOW THE REQUIRED RAMP SLOPE (BOTH NEW CONSTRUCTION AND ALTERATIONS).
	TYPE 4	TANGENT LOCATIONS (BOTH NEW CONSTRUCTION AND ALTERATIONS).
SECOND CHOICE	TYPE 5	TANGENT LOCATIONS (ALTERATIONS ONLY).
THIRD CHOICE	TYPE 6	CORNER LOCATIONS (ALTERATIONS ONLY). THIS RAMP MAY BE USED ONLY IF THE TYPE 5 RAMPS CANNOT BE PLACED AT THE ENDS OF THE RADIUS.
FOURTH CHOICE		IF SITE CONSTRAINTS PREVENT THE CONSTRUCTION OF ANY OF THE TYPES LISTED, THEN AND ONLY THEN CAN THE 12:1 MAX. SLOPE ON THE RAMP BE EXCEEDED TO PROVIDE ACCESS TO THE STREET LEVEL (ALTERATIONS ONLY). THE SLOPE CAN BE STEEPENED TO A 10:1 MAX. FOR A MAX. LENGTH OF 5' OR A 8:1 MAX. FOR A MAX. LENGTH OF 2'. SLOPES STEEPER THAN 8:1 ARE NOT ALLOWED UNDER ANY CIRCUMSTANCES.

NOTE: IN ALTERATIONS, THE SELECTION OF THE TYPE OF WHEELCHAIR RAMP TO BE CONSTRUCTED SHALL BE BASED ON THE AMOUNT OF RIGHT-OF-WAY AVAILABLE, AND ON THE PRESENCE OF OTHER SITE CONSTRAINTS (UTILITIES, BUILDINGS, ETC.). THE TABLE ABOVE LISTS THE ORDER IN WHICH THE RAMPS ARE TO BE CONSIDERED. AN ALTERATION IS DEFINED AS A PROJECT THAT CHANGES OR AFFECTS THE USE OF A PEDESTRIAN PATHWAY (OVERLAYS, SIGNALIZATION PROJECTS, ETC.) BUT DOES NOT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY. ALL PROJECTS THAT REQUIRE THE PURCHASE OF ADDITIONAL RIGHT-OF-WAY WILL USUALLY BE CONSIDERED NEW CONSTRUCTION FOR THE PURPOSES OF THE CHART ABOVE.

DATE	REVISION	DATE FILED
8-10-05	REVISED TO NEW SIDEWALK POLICY	
10-9-03	REVISED GEN. NOTES & ADDED NOTE	
4-10-03	REV. DETECTABLE WARNING DEVICES	
8-22-02	ADD DETECTABLE WARNING DEVICES	
3-30-00	ADD SLOPE TRANS. & REV. ISL. DIMS.	
5-18-98	REVISED NOTES	
8-12-98	REVISED TEXTURE	
7-02-98	REDRAWN & REISSUED	
10-18-96	CORRECTED DIMENSIONS	10-18-96
5-24-90	FROM 8:1 TO 12:1 MAX. SLOPES	5-24-90
7-15-88	ADJUSTED MAX. SLOPE	652-7-15-88
7-14-88	INCL. "CONC. ISL." IN PAY ITEM	
6-02-76	ISSUED P.H.D.	299-7-28-76

ARKANSAS STATE HIGHWAY COMMISSION
WHEELCHAIR RAMPS NEW CONSTRUCTION AND ALTERATIONS
STANDARD DRAWING WR-1