



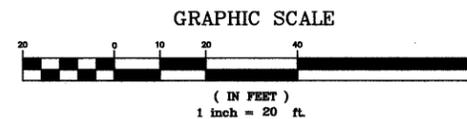
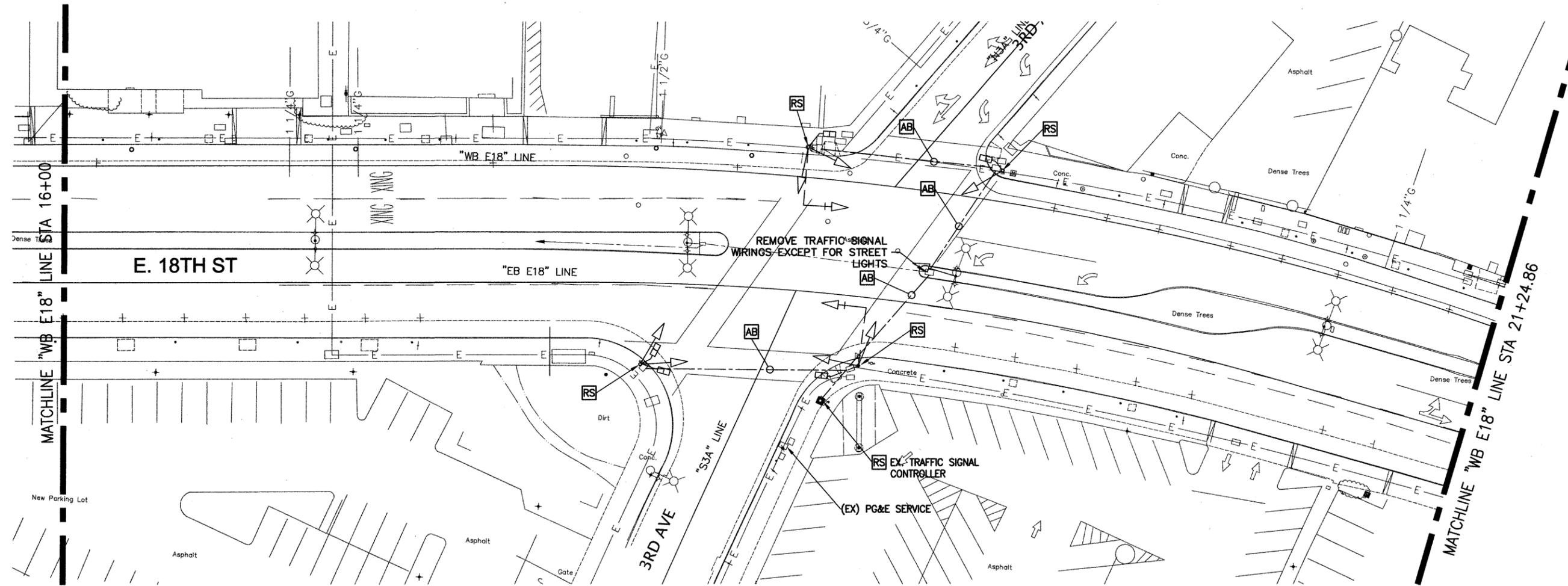
THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT AND THE CITY PUBLIC WORKS AGENCY AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO BEGINNING ANY EXCAVATION IN THE VICINITY OF UNDERGROUND FACILITIES.

DEMOLITION NOTES:

- AB** REMOVE CONDUCTOR. CONDUIT TO REMAIN.
- RS** REMOVE AND SALVAGE EQUIPMENT.

PROJECT NOTES:

1. THE LOCATION AND SIZE OF MAJOR UNDERGROUND FACILITIES AND UTILITIES SHOWN HEREON ARE SCHEMATIC IN NATURE, USING INFORMATION FURNISHED BY THE RESPECTIVE AGENCIES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DATA WITH THE RESPECTIVE AGENCIES AND TAKING PROPER PRECAUTIONS TO PROTECT AND AVOID THE EXISTING FACILITIES AND UTILITIES.
2. CONTRACTOR SHALL EXERCISE DUE CAUTION WHEN OVER OR AROUND EXISTING FACILITIES (CONDUITS, CULVERTS, UTILITIES, ETC). ANY DAMAGE TO NEW OR EXISTING FACILITIES RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AND THE CITY PUBLIC WORKS AGENCY AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO BEGINNING ANY EXCAVATION IN THE VICINITY OF UNDERGROUND FACILITIES. USA WILL MARK LOCATIONS OF UTILITIES.



THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.



E18TH STREET IMPROVEMENT PROJECT



CIVIL ENGINEER	No.	DATE	BY	REFERENCE
RCE NO. _____ EXP. _____				
CHECKED BY AC				
DESIGNED BY EB				
DRAWN BY EB				

**EXISTING CONDITION
REMOVAL AND
SALVAGE
AT
E 18TH ST/ 3RD AVE**

PROJECT NO.
P233285
SCALE: 1" = 20'
HOR: X"=X'
VERT: X"=X'
DATE: DEC. 2010
SHEET NO.
TS-2
39 OF **52**

HALF SIZE

DRAWING NAME: P:\Divisions_and_Team\Transportation\Projects\E18th St Improv\Proj_Signal Mod\Mod\CADD\Sheets\TS-2.dwg
PLOT DATE: 02-09-11
PLOTTED BY: bende



THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT AND THE CITY PUBLIC WORKS AGENCY AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO BEGINNING ANY EXCAVATION IN THE VICINITY OF UNDERGROUND FACILITIES.

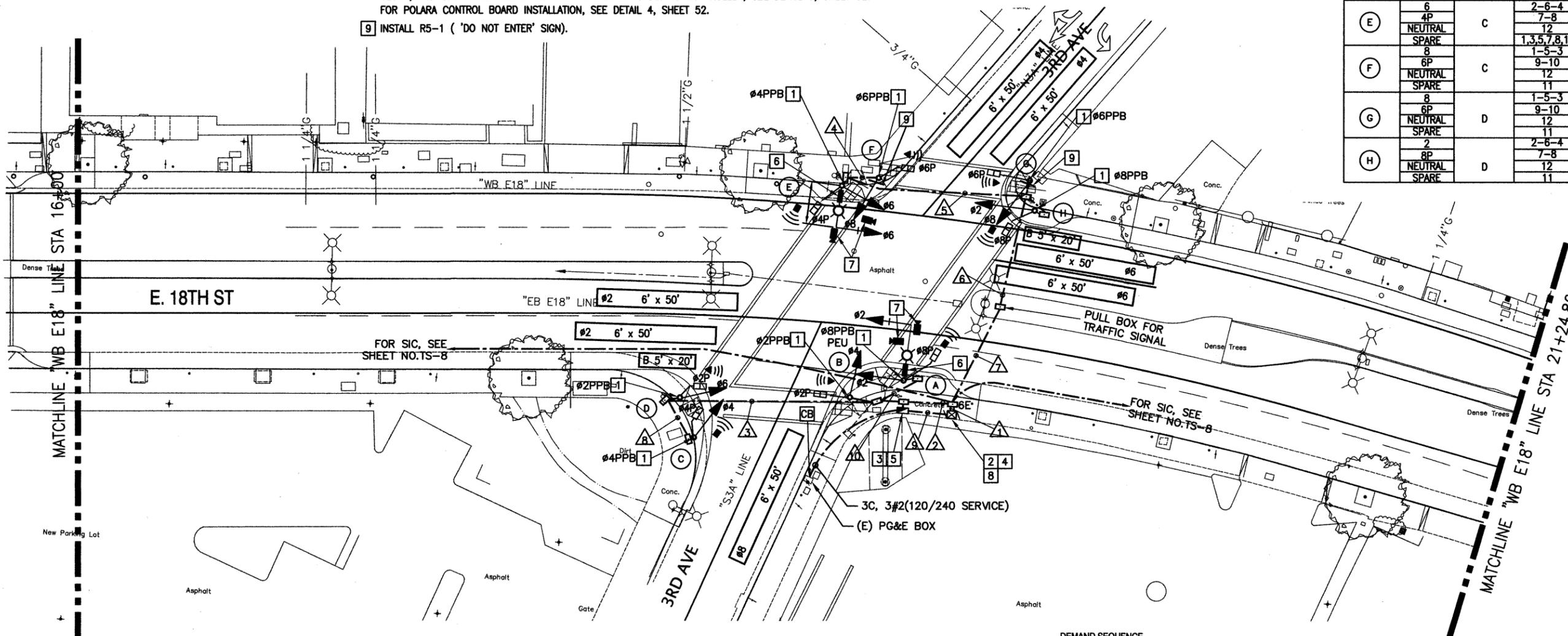
CONSTRUCTION NOTES:

- 1 INSTALL FOUNDATION FOR SIGNAL STANDARD PER POLE AND EQUIPMENT SCHEDULE ON TS-4.
- 2 INSTALL FOUNDATION FOR STATE CALTRANS TYPE 332 CABINET PER CALTRANS STANDARD PLANS (JULY 2006) ES-3C.
- 3 INSTALL FOUNDATION FOR TYPE III-AF SERVICE PEDESTAL AND METER PER CALTRANS STANDARD PLANS (JULY 2006) ES-2C AND ES-2D.
- 4 FURNISH AND INSTALL FULLY FUNCTIONAL 2070L CONTROLLER ASSEMBLY WITH NAZTEC APOGEE SOFTWARE AND CALTRANS TYPE 332 CABINET. 332 CABINET SHALL BE PAINTED BOXWOOD GREEN (RAL 6011).
- 5 INSTALL TYPE III-AF 120/240 SERVICE ENCLOSURE PER SPECIAL PROVISIONS. ENCLOSURE SHALL BE GALVANIZED.
- 6 INSTALL LED ILLUMINATED STREET NAME SIGN (IISNS) ON SIGNAL MAST ARM
- 7 INSTALL VIDEO DETECTION CAMERAS AND MOUNT AT BEST POSSIBLE LOCATIONS OR AS DIRECTED BY ENGINEER.
- 8 INSTALL GPS CLOCK, CABLE AND ANTENNA, DRILL MOUNTING HOLE FOR THE ANTENNA AND EPOXY ANTENNA ON TO CONTROLLER CABINET. INSTALL RG-6 ANTENNA CABLE TO CLOCK, AND GPS POWER CORD AND C2S CONNECTOR CABLE TO CONTROLLER, SEE DETAIL 3, SHEET 52. FOR POLARA CONTROL BOARD INSTALLATION, SEE DETAIL 4, SHEET 52.
- 9 INSTALL R5-1 ('DO NOT ENTER' SIGN).

NOTE:

FOR TRAFFIC SIGNAL NOTES, SEE SHEET NO. TS-1

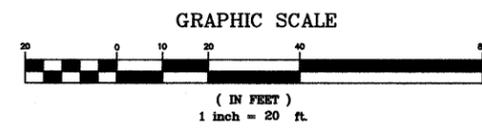
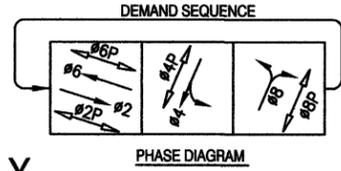
12C#14 TS ASSIGNMENTS				SPLICE CHAMBER(S)
POLE	PHASE	CABLE(S)	CONDUCTOR Nos.	
A	2	A	2-6-4	A
	8P		7-8	
	NEUTRAL SPARE		11	
B	4	A	1-5-3	A
	2P		9-10	
	NEUTRAL SPARE		11	
C	4	B	1-5-3	B
	4P		7-8	
	NEUTRAL SPARE		11	
D	6	B	2-6-4	B
	2P		9-10	
	NEUTRAL SPARE		11	
E	6	C	2-6-4	C
	4P		7-8	
	NEUTRAL SPARE		11	
F	8	C	1,3,5,7,8,11	C
	6P		1-5-3	
	NEUTRAL SPARE		11	
G	8	D	1-5-3	D
	6P		9-10	
	NEUTRAL SPARE		11	
H	2	D	2-6-4	D
	8P		7-8	
	NEUTRAL SPARE		11	



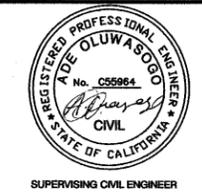
APPLICABLE CALTRANS STANDARDS

JULY 2006				
ES-1A	ES-2D	ES-3C	ES-5A	ES-5D
ES-1B	ES-3A	ES-3D	ES-5B	ES-8
ES-2C	ES-3B	ES-3E	ES-5C	

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.



E18TH STREET IMPROVEMENT PROJECT



CIVIL ENGINEER	No.	DATE	BY	REFERENCE
RCE No. _____ EXP. _____				
CHECKED BY AC				
DESIGNED BY EB				
DRAWN BY EB				

TRAFFIC SIGNAL MODIFICATION PLAN
AT
E 18TH ST/ 3RD AVE

PROJECT NO. P233285	
SCALE: 1" = 20' HOR: X"=X' VERT: X"=X'	SHEET NO. TS-3 40 OF 52
DATE: DEC 2010	

HALF SIZE

DRAWING NAME: P:\Divisions_and_Teams\Transportation\Projects\E18th St Impov\Proj_Signal Mod\CAD\Drawings\TS-2.dwg
PLOT DATE: 02-14-11
PLOT BY: bmb

POLE AND EQUIPMENT SCHEDULE*

SIGNAL POLE	STANDARD			SIGNAL MOUNTING **		PED PUSH BUTTON	AUDIBLE PED SIGNAL Ø	HPS LUMINAIRE WATTAGE	FOUNDATION DETAIL STD. DWG.	INTERNALLY ILLUMINATED STREET NAME SIGN (IISNS) ***	REMARKS *
	TYPE	SIGNAL MAST ARM	LUMINAIRE MAST ARM	MAST ARM	POLE						
(A)	CALTRANS 17-2-100	15'	6'	M-1V	S-1V-1P	8	8	200	ES-7D	3rd Ave 1800 ←	ALL NEW EQUIPMENT.
(B)	CALTRANS TYPE 1-B	-	-	-	T-1V-1P	2	2	-	ES-7B		ALL NEW EQUIPMENT.
(C)	CALTRANS TYPE 1-B	-	-	-	T-1V-1P	4	4	-	ES-7B		ALL NEW EQUIPMENT.
(D)	14' PED. CITY STANDARD	-	-	-	S-1V-1P	2	2	-	E-5 CITY STANDARD		ALL NEW EQUIPMENT.
(E)	CALTRANS 17-2-100	15'	6'	M-1V	S-1V-1P	4	4	200	ES-7D	3rd Ave 1800 →	ALL NEW EQUIPMENT.
(F)	CALTRANS TYPE 1-B	-	-	-	T-1V-1P	6	6	-	ES-7B		ALL NEW EQUIPMENT.
(G)	CALTRANS TYPE 1-B	-	-	-	T-1V-1P	6	6	-	ES-7B		ALL NEW EQUIPMENT.
(H)	CALTRANS TYPE 1-B	-	-	-	T-1V-1P	8	8	-	ES-7B		ALL NEW EQUIPMENT.

*SEE SPECIAL PROVISIONS FOR LIST OF CITY-FURNISHED EQUIPMENT
 **12" SIGNAL LENSE TO ALL TRAFFIC SIGNAL EXCEPT AS NOTED.
 *** IISNS

Letter & Symbol Size

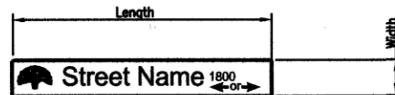
Upper case = 8"
 Lower case = 6"
 City of Oakland Emblem = 8" x 8"
 St, Rd, Blvd, Lp, Pl, Dr, and Ave = 4"
 Block Number = 3"
 Arrows = 8" x 8"

Color

Background = Green
 Letters/Symbol = White

Internally Illuminated Street Name Sign (IISNS) Size

Width = 20.69"
 Length = 6' to 8'

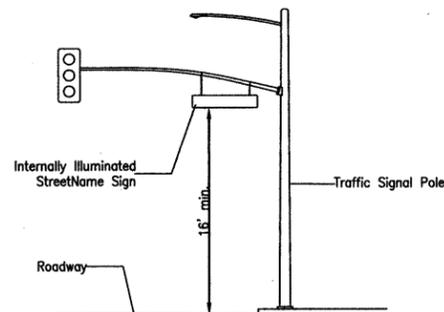


Internally Illuminated Street Name Sign (IISNS)

All IISNS to be double sided

Location and Installation of IISNS

When feasible and if there is no conflict with operating traffic signal equipment(s), IISNS shall be installed as close as possible to the signal head. Minimum vertical clearance shall be 16' (as shown below) at the most restrictive location (closer to the pole).



Notes:

- Prior to installation, contractor shall provide to the City a complete set of submittals, specifying proposed letter size, symbols, colors, background and location informations for City's final review and approval.
- It is the sole responsibility of the Contractor to field verify all pertinent information installing IISNS.

NOTE:

- INSTALL 5C#14 SIGNAL CABLE BETWEEN ALL TRAFFIC SIGNAL MAST ARM SIGNAL HEADS AND SIDE-MOUNT ADAPTERS.
- FOR POLARA NAVIGATOR CONTROL BOARD TO PPB, CONNECT BOARD TO PPB WITH 9175 NEC CM FT 4 OR APPROVED EQUAL PER MANUFACTURERS SPECS.

CABLE/CONDUCTOR SCHEDULE

CABLE/CONDUCTOR DESIGNATION	No. OF CONDUCTORS/RUN No.									
	1	2	3	4	5	6	7	8	9	10
SIGNAL CABLE 12C#14 TS										
'A' CABLE - (#2,#4,#2P,#8P, NEUTRAL)	1	1								1
'B' CABLE - (#4,#6,#2P,#4P, NEUTRAL)	1	1	1						1	
'C' CABLE - (#6,#8,#4P,#6P, NEUTRAL)	1	1		1	1	1	1			
'D' CABLE - (#2,#8,#6P,#8P, NEUTRAL)	1	1				1	1			
TOTAL SIGNAL CABLES	4	4	1	1	1	2	2			
SIGNAL CABLE 3C#14 UF W/GRD (PPB) (CONTROLS SPEAKER, LED, VIBRATOR AND PPB)										
PPB (#2P)	1	1	1							
PPB (#4P)	1	1	1	1	1	1	1	1		
PPB (#6P)	1				1	1	1			
PPB (#8P)	1					1	1			
TOTAL PPB CABLES	4	2	2	1	2	3	3	1		
#14 CONDUCTORS THHN PEU										3
VIDEO DETECTION (COAXIAL CABLE)										
Ø2	1	1								1
Ø4	1	1								1
Ø6	1	1		1	1	1	1			
Ø8	1	1		1	1	1	1			
TOTAL COAXIAL CABLE	4	4		2	2	2	2			2
VIDEO POWER CABLE, 2C#12 UF W/GRND	1	1	1	1	1	1	1			1
No. 8 CONDUCTORS, THHN/THWN										
240V LIGHTING		2	2	2	2	2	2			2
EQUIPMENT BOND WIRE (GRN)		1	1	1	1	1	1			1
TOTAL No. 8		3	3	3	3	3	3			3
No. 10 CONDUCTORS, THHN/THWN										
LED IISNS	2	2		2	2	2	2			2
No. 6 CONDUCTORS										
FEEDER TO CONTROLLER (120V)	2	2								2
SIGNAL INTERCONNECT CABLE (SIC)	2									
CONDUIT SIZE (INCHES)	2-3	3	3	3	3	3	3	3	3	3

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.



E18TH STREET IMPROVEMENT PROJECT



CIVIL ENGINEER	No.	DATE	BY	REFERENCE
RCE NO. _____ EXP. _____				
CHECKED BY AC				
DESIGNED BY EB				
DRAWN BY EB				

POLE & EQUIPMENT, CABLE/CONDUCTOR SCHEDULES
 AT
 E 18TH ST/ 3RD AVE

PROJECT NO.
P233285
 SCALE: -
 HOR: -
 VERT: -
 DATE: DEC 2010
 SHEET NO.
 TS-4
 41 OF 52

HALF SIZE

DRAWING NAME: P:\Divisions and Teams\Transportation\Projects\E18th St Impr\Proj_Signal Modis\CADD\Sheet\TS-2.dwg
 PLOT DATE: 02-14-11
 PLOTTED BY: betulde



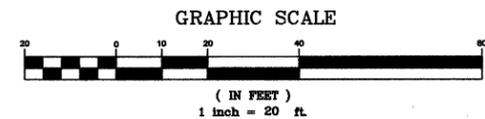
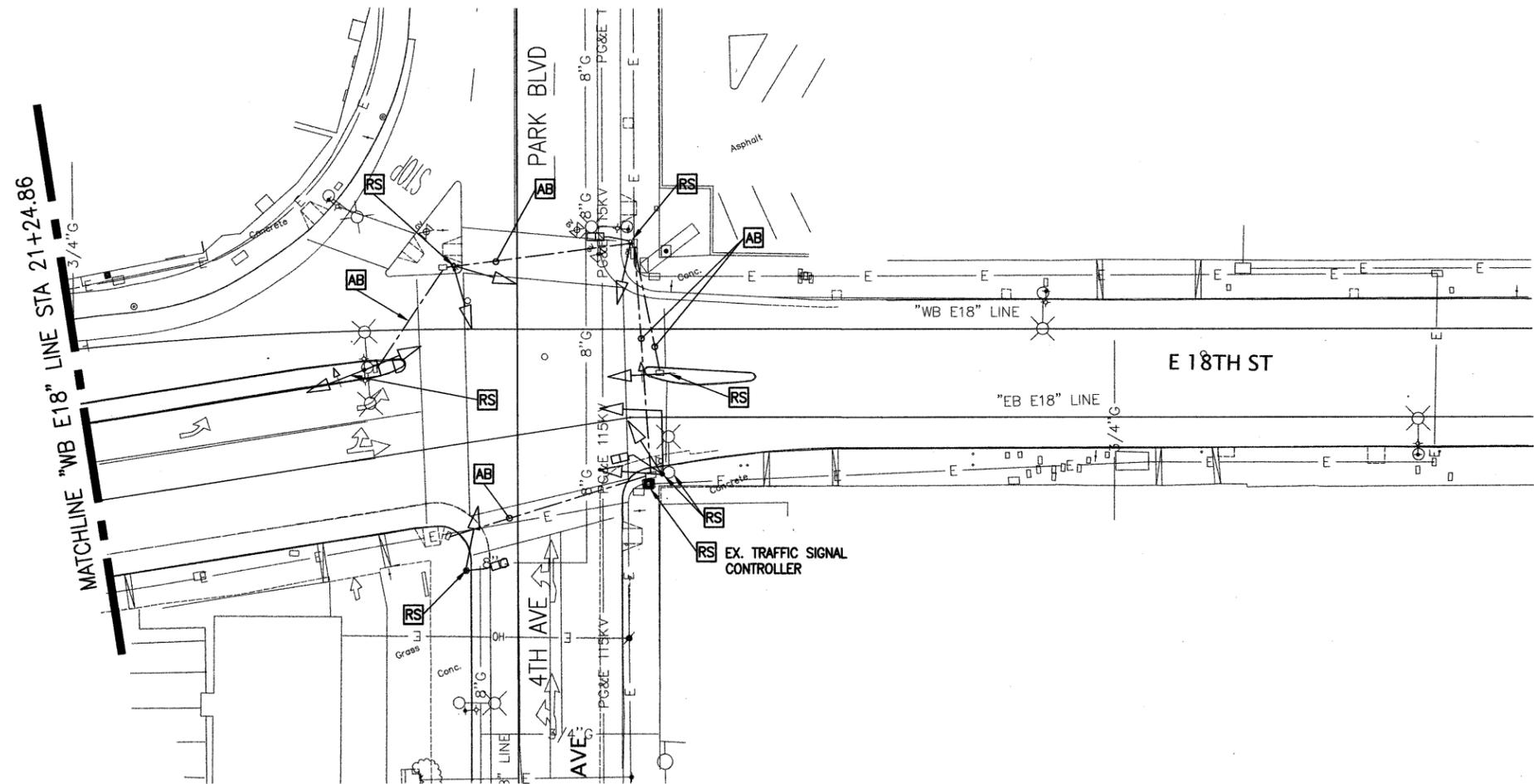
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DEMOLITION NOTES:

- AB** REMOVE CONDUCTOR. CONDUIT TO REMAIN.
- RS** REMOVE AND SALVAGE EQUIPMENT.

PROJECT NOTES:

1. THE LOCATION AND SIZE OF MAJOR UNDERGROUND FACILITIES AND UTILITIES SHOWN HEREON ARE SCHEMATIC IN NATURE, USING INFORMATION FURNISHED BY THE RESPECTIVE AGENCIES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DATA WITH THE RESPECTIVE AGENCIES AND TAKING PROPER PRECAUTIONS TO PROTECT AND AVOID THE EXISTING FACILITIES AND UTILITIES.
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E18TH STREET IMPROVEMENT PROJECT



CIVIL ENGINEER	No.	DATE	BY	REFERENCE
RCE NO. _____ EXP. _____				
CHECKED BY AC				
DESIGNED BY EB				
DRAWN BY EB				

**EXISTING CONDITION
REMOVAL AND
SALVAGE**
AT
E 18TH ST/ PARK AVE AND 4TH AVE

PROJECT NO.
P233285

SCALE: 1" = 20'
HOR: X"=X'
VERT: X"=X'
DATE: DEC 2010

SHEET NO.
TS-5
42 OF 52

HALF SIZE

DRAWING NAME: P:\Divisions_and_Teams\Transportation\Projects\E18th St Impr\Proj_Signal Model\CADD\Sheets\TS-2 & 4.dwg
PLOT DATE: 01-24-11
PLOTTED BY: beribe



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NOTE:

FOR TRAFFIC SIGNAL NOTES, SEE SHEET NO. TS-1

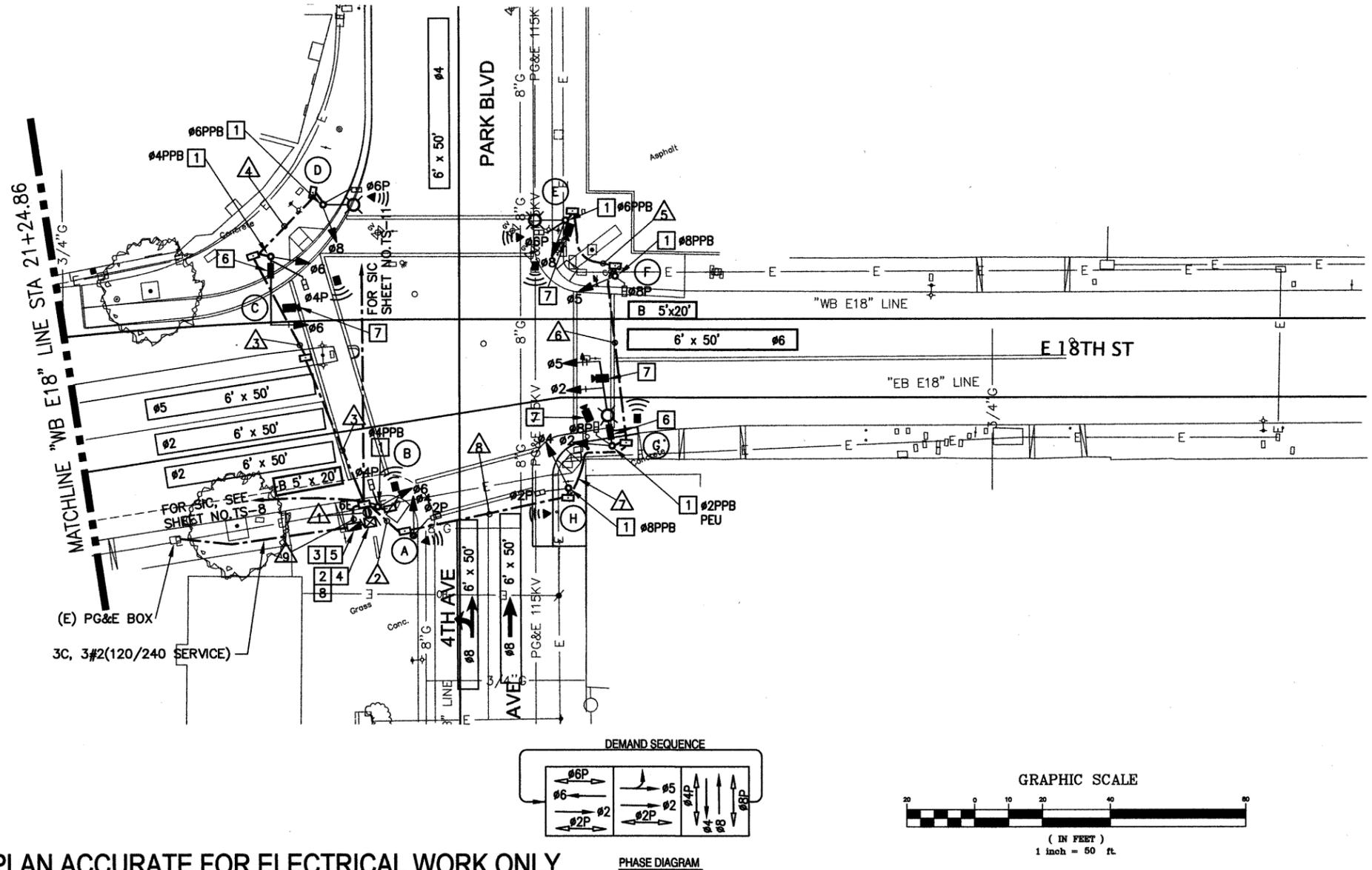
APPLICABLE CALTRANS STANDARDS

JULY 2006				
ES-1A	ES-2D	ES-3C	ES-5A	ES-5D
ES-1B	ES-3A	ES-3D	ES-5B	ES-8
ES-2C	ES-3B	ES-3E	ES-5C	

CONSTRUCTION NOTES:

- 1 INSTALL FOUNDATION FOR SIGNAL STANDARD PER POLE AND EQUIPMENT SCHEDULE ON TS-4.
- 2 INSTALL FOUNDATION FOR STATE CALTRANS TYPE 332 CABINET PER CALTRANS STANDARD PLANS (JULY 2006) ES-3C.
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- 5 INSTALL TYPE III-AF 120/240 SERVICE ENCLOSURE PER SPECIAL PROVISIONS. ENCLOSURE SHALL BE GALVANIZED.
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- 7 INSTALL VIDEO DETECTION CAMERAS AND MOUNT AT BEST POSSIBLE LOCATIONS OR AS DIRECTED BY ENGINEER.
- 8 INSTALL GPS CLOCK, CABLE AND ANTENNA, DRILL MOUNTING HOLE FOR THE ANTENNA AND EPOXY ANTENNA ON TO CONTROLLER CABINET. INSTALL RG-6 ANTENNA CABLE TO CLOCK, AND GPS POWER CORD AND C2S CONNECTOR CABLE TO CONTROLLER, SEE DETAIL 3, SHEET 52. FOR POLARA CONTROL BOARD INSTALLATIONS, SEE DETAIL 4, SHEET 52.

12C#14 TS ASSIGNMENTS				SPLICE CHAMBER(S)
POLE	PHASE	CABLE(S)	CONDUCTOR Nos.	
A	4	A	1-5-3	A
	2P		9-10	
	NEUTRAL SPARE		12	
B	2	A	2-6-4	A
	4P		7-8	
	NEUTRAL SPARE		12	
C	6	B	2-6-4	B
	4P		7-8	
	NEUTRAL SPARE		12	
D	4	B	1-5-3	B
	6P		9-10	
	NEUTRAL SPARE		12	
E	8	C	1-5-3	C
	6P		9-10	
	NEUTRAL SPARE		12	
F	5	C	2-6-4	C
	8P		9-10	
	NEUTRAL SPARE		12	
G	2	D	2,4,7,8,11	D
	5		2-6-4	
	8P		7-8	
H	4	A	1-5-3	A
	2P		9-10	
	NEUTRAL SPARE		12	

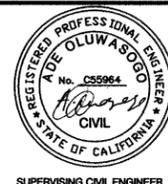


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CITY OF OAKLAND
TRANSPORTATION SERVICES DIVISION
250 FRANK H. OGAWA PLAZA, SUITE 4344 • OAKLAND CA, 94612
(510) 238-3466 • FAX (510) 238-7415

E18TH STREET IMPROVEMENT PROJECT



CIVIL ENGINEER	No.	DATE	BY	REFERENCE
RCE NO. _____ EXP. _____				
CHECKED BY AC				
DESIGNED BY EB				
DRAWN BY EB				

TRAFFIC SIGNAL MODIFICATION PLAN
AT
E 18TH ST/ PARK AVE AND 4TH AVE

PROJECT NO.
P233285
SCALE: 1" = 20'
HOR: X"=X'
VERT: X"=X'
DATE: DEC 2010
SHEET NO.
TS-6
43 OF 52

HALF SIZE

DRAWING NAME: P:\Divisions and Teams\Transportation\Projects\E18th St Improv\Proj_Signal Mod\CAD\Drawings\TS-2.dwg
PLOT DATE: 02-14-11
PLOTTED BY: bndubs

POLE AND EQUIPMENT SCHEDULE*

SIGNAL POLE	STANDARD			SIGNAL MOUNTING		PED PUSH BUTTON		AUDIBLE PED SIGNAL Ø	HPS LUMINAIRE WATTAGE	FOUNDATION DETAIL STD. DWG.	INTERNALLY ILLUMINATED STREET NAME SIGN (IISNS) ***	REMARKS *
	TYPE	SIGNAL MAST ARM	LUMINAIRE MAST ARM	MAST ARM	POLE **	Ø	ARROW					
(A)	CALTRANS TYPE 1-B	-	-	-	T-1V-1P	2	←	2	-	ES-4C, 7B		ALL NEW EQUIPMENT.
(B)	DECORATIVE POLE	-	-	-	T-1V-1P	4	←	4	-	ES-4C, 7B		ALL NEW EQUIPMENT.
(C)	CALTRANS 18-2-100	20'	-	M-1V	S-1V-2P	4	←	4	-	ES-7D, 7M,7N	Park Blvd 1800 →	ALL NEW EQUIPMENT.
(D)	CALTRANS TYPE 15TS	-	6'	-	S-1V-1P	6	←	6	150	ES-4C, 7B		ALL NEW EQUIPMENT.
(E)	CALTRANS TYPE 15TS	-	6'	-	S-1V-1P	6	←	6	150	ES-4C, 7B		ALL NEW EQUIPMENT.
(F)	CALTRANS TYPE 1-B	-	-	-	T-1V-1P	8	←	8	-	ES-4C, 7B		ALL NEW EQUIPMENT.
(G)	CALTRANS 17-2-100	20'	6'	M-1V	S-1V-2P	8	←	8	200	ES-7D, 7M,7N	4th Avenue ← 1800	ALL NEW EQUIPMENT.
(H)	CALTRANS TYPE 1-B	-	-	-	T-1V-1P	2	←	2	-	ES-4C, 7B		ALL NEW EQUIPMENT.

*SEE SPECIAL PROVISIONS FOR LIST OF CITY-FURNISHED EQUIPMENT
 **12" SIGNAL LENSE TO ALL TRAFFIC SIGNAL EXCEPT AS NOTED.
 ***IISNS

Letter & Symbol Size

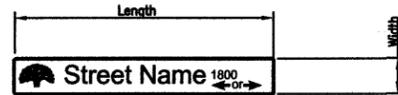
Upper case = 8"
 Lower case = 6"
 City of Oakland Emblem = 8" x 8"
 St, Rd, Blvd, Lp, Pl, Dr, and Ave = 4"
 Block Number = 3"
 Arrows = 8" x 8"

Color

Background = Green
 Letters/Symbol = White

Internally Illuminated Street Name Sign (IISNS) Size

Width = 20.69"
 Length = 6' to 8'

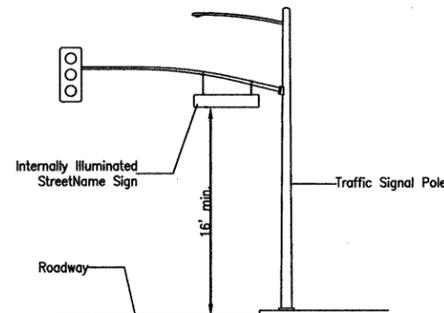


Internally Illuminated Street Name Sign (IISNS)

All IISNS to be double sided

Location and Installation of IISNS

When feasible and if there is no conflict with operating traffic signal equipment(s), IISNS shall be installed as close as possible to the signal head. Minimum vertical clearance shall be 16' (as shown below) at the most restrictive location (closer to the pole).



Notes:

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NOTE:

- INSTALL 5C#14 SIGNAL CABLE BETWEEN ALL TRAFFIC SIGNAL MAST ARM SIGNAL HEADS AND SIDE-MOUNT ADAPTERS.
- FOR POLARA NAVIGATOR CONTROL BOARD TO PPB, CONNECT BOARD TO PPB WITH 9175 NEC CM FT 4 OR APPROVED EQUAL PER MANUFACTURERS SPECS.

POLE	PHASE	CABLE(S)	12C#14 TS ASSIGNMENTS		SPLICE CHAMBER(S)
			CONDUCTOR Nos.		
(A)	4	A	1-5-3	A	
	2P		9-10		
	NEUTRAL		12		
	SPARE		11		
(B)	2	A	2-6-4	A	
	4P		7-8		
	NEUTRAL		12		
	SPARE		1,3,5,7,8,11		
(C)	6	B	2-6-4	B	
	4P		7-8		
	NEUTRAL		12		
	SPARE		11		
(D)	8	B	1-5-3	B	
	6P		9-10		
	NEUTRAL		12		
	SPARE		11		
(E)	8	C	1-5-3	C	
	6P		9-10		
	NEUTRAL		12		
	SPARE		11		
(F)	5	C	2-6-4	C	
	8P		9-10		
	NEUTRAL		12		
	SPARE		2,4,7,8,11		
(G)	2	D	2-6-4	D	
	8P		1-5-3		
	NEUTRAL		7-8		
	SPARE		12		
	4	A	9,10,11	A	
	2P		1-5-3		
	NEUTRAL		12		
	SPARE		11		

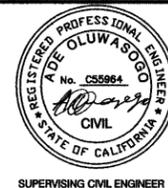
CABLE/CONDUCTOR SCHEDULE

CONDUCTOR DESIGNATION	No. OF CONDUCTORS/RUN No.								
	1	2	3	4	5	6	7	8	9
SIGNAL CABLE 12C#14 TS									
'A' CABLE - (Ø2,Ø4,Ø2P,Ø4P, NEUTRAL)	1	1							
'B' CABLE - (Ø4, Ø6, Ø4P, Ø6P, NEUTRAL)	1		1	1					
'C' CABLE - (Ø5, Ø8, Ø6P, Ø8P, NEUTRAL)	1	1	1	1	1	1			
'D' CABLE - (Ø2,Ø5,Ø8P, NEUTRAL)	1	1					1	1	
TOTAL SIGNAL CABLES	4	3	2	2	1	1	1	1	
SIGNAL CABLE 3C#14 UF W/GRD (PPB)									
(CONTROLS SPEAKER, LED, VIBRATOR AND PPB)									
PPB (Ø2P)	1	1							1
PPB (Ø4P)	1	1	1						
PPB (Ø6P)	1	1	1	1	1				
PPB (Ø8P)	1	1	1	1	1	1	1	1	
TOTAL PPB CABLES	4	4	3	2	2	1	1	2	
#14 CONDUCTORS THHN PEU		3					3	3	3
VIDEO DETECTION (COAXIAL CABLE)									
Ø2,Ø5	1	1					1	1	
Ø4	1	1					1	1	
Ø6	1		1						
Ø8	1	1			1	1	1	1	
TOTAL COAXIAL CABLE	4	3	1		1	1	2	2	
VIDEO POWER CABLE, 2C#12 UF W/GRND	1	1	1		1	1	1	1	1
No. 8 CONDUCTORS, THHN/THWN									
240V LIGHTING		2	2	2	2		2	2	2
EQUIPMENT BOND WIRE (GRN)		1	1	1	1		1	1	1
TOTAL No. 8		3	3	3	3		3	3	3
No. 10 CONDUCTORS, THHN/THWN									
LED IISNS	2	2	2	2	2	2	2	2	2
No. 6 CONDUCTORS									
FEEDER TO CONTROLLER (120V)	2	2							
SIGNAL INTERCONNECT CABLE (SIC)	2								
CONDUIT SIZE (INCHES)	2-3	3	3	3	3	3	3	3	3

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.



E18TH STREET IMPROVEMENT PROJECT



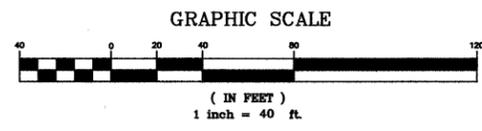
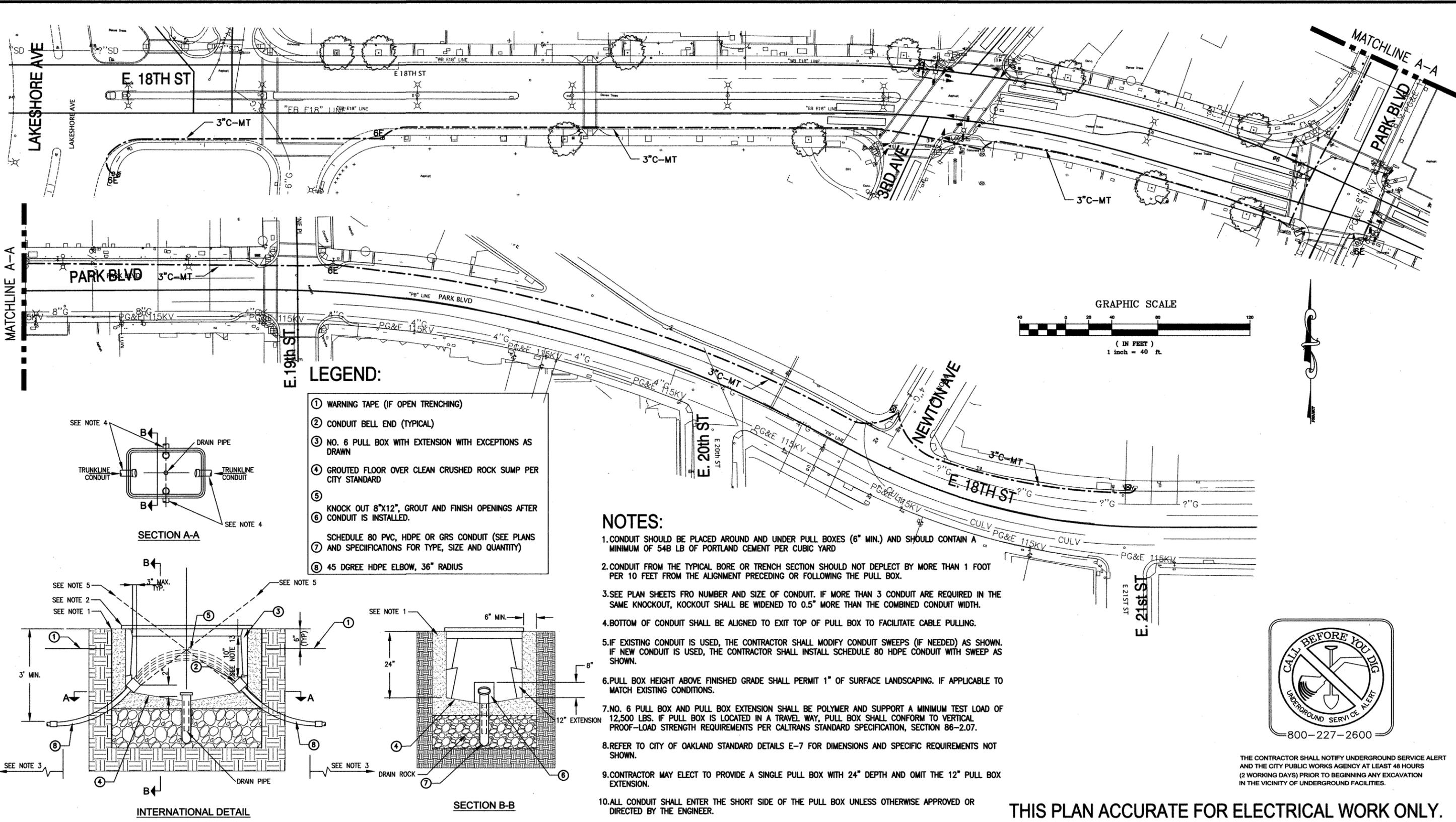
CIVIL ENGINEER	No.	DATE	BY	REFERENCE
RCE NO. _____ EXP. _____				
CHECKED BY AC				
DESIGNED BY EB				
DRAWN BY EB				

POLE & EQUIPMENT, CABLE/CONDUCTOR SCHEDULES
 AT
 E 18TH ST/ PARK AVE AND 4TH AVE

PROJECT NO. **P233285**
 SCALE: -
 HOR: -
 VERT: -
 DATE: DEC 2010
 SHEET NO. **TS-7**
44 OF **52**

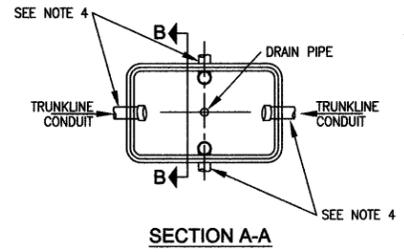
HALF SIZE

DRAWING NAME: P:\Divisions_and_Teams\Transportation\Projects\E 18th St Imp\Proj_Signal Mod\CAD\Sheet\TS-2.B.dwg
 PLOTTED BY: bente

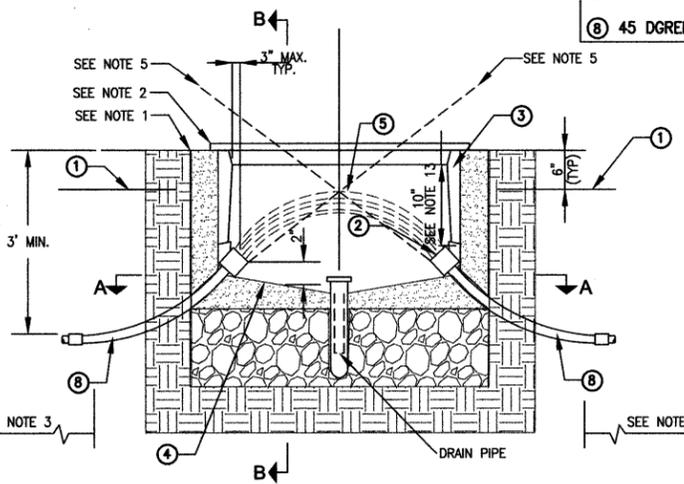


- LEGEND:**
- ① WARNING TAPE (IF OPEN TRENCHING)
 - ② CONDUIT BELL END (TYPICAL)
 - ③ NO. 6 PULL BOX WITH EXTENSION WITH EXCEPTIONS AS DRAWN
 - ④ GROUTED FLOOR OVER CLEAN CRUSHED ROCK SUMP PER CITY STANDARD
 - ⑤ KNOCK OUT 8"x12", GROUT AND FINISH OPENINGS AFTER CONDUIT IS INSTALLED.
 - ⑥ 45 DEGREE HDPE ELBOW, 36" RADIUS
- SCHEDULE 80 PVC, HDPE OR GRS CONDUIT (SEE PLANS AND SPECIFICATIONS FOR TYPE, SIZE AND QUANTITY)

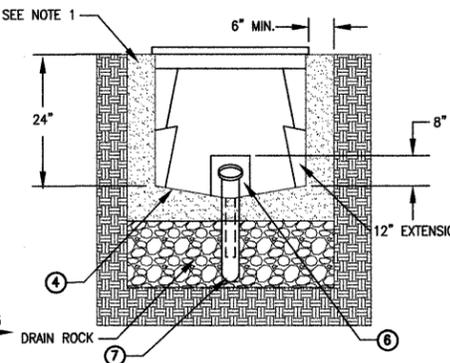
- NOTES:**
1. CONDUIT SHOULD BE PLACED AROUND AND UNDER PULL BOXES (6" MIN.) AND SHOULD CONTAIN A MINIMUM OF 548 LB OF PORTLAND CEMENT PER CUBIC YARD
 2. CONDUIT FROM THE TYPICAL BORE OR TRENCH SECTION SHOULD NOT DEPECT BY MORE THAN 1 FOOT PER 10 FEET FROM THE ALIGNMENT PRECEDING OR FOLLOWING THE PULL BOX.
 3. SEE PLAN SHEETS FRO NUMBER AND SIZE OF CONDUIT. IF MORE THAN 3 CONDUIT ARE REQUIRED IN THE SAME KNOCKOUT, KOCKOUT SHALL BE WIDENED TO 0.5" MORE THAN THE COMBINED CONDUIT WIDTH.
 4. BOTTOM OF CONDUIT SHALL BE ALIGNED TO EXIT TOP OF PULL BOX TO FACILITATE CABLE PULLING.
 5. IF EXISTING CONDUIT IS USED, THE CONTRACTOR SHALL MODIFY CONDUIT SWEEPS (IF NEEDED) AS SHOWN. IF NEW CONDUIT IS USED, THE CONTRACTOR SHALL INSTALL SCHEDULE 80 HDPE CONDUIT WITH SWEEP AS SHOWN.
 6. PULL BOX HEIGHT ABOVE FINISHED GRADE SHALL PERMIT 1" OF SURFACE LANDSCAPING. IF APPLICABLE TO MATCH EXISTING CONDITIONS.
 7. NO. 6 PULL BOX AND PULL BOX EXTENSION SHALL BE POLYMER AND SUPPORT A MINIMUM TEST LOAD OF 12,500 LBS. IF PULL BOX IS LOCATED IN A TRAVEL WAY, PULL BOX SHALL CONFORM TO VERTICAL PROOF-LOAD STRENGTH REQUIREMENTS PER CALTRANS STANDARD SPECIFICATION, SECTION 86-2.07.
 8. REFER TO CITY OF OAKLAND STANDARD DETAILS E-7 FOR DIMENSIONS AND SPECIFIC REQUIREMENTS NOT SHOWN.
 9. CONTRACTOR MAY ELECT TO PROVIDE A SINGLE PULL BOX WITH 24" DEPTH AND OMIT THE 12" PULL BOX EXTENSION.
 10. ALL CONDUIT SHALL ENTER THE SHORT SIDE OF THE PULL BOX UNLESS OTHERWISE APPROVED OR DIRECTED BY THE ENGINEER.



SECTION A-A



INTERNATIONAL DETAIL



SECTION B-B



THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT AND THE CITY PUBLIC WORKS AGENCY AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO BEGINNING ANY EXCAVATION IN THE VICINITY OF UNDERGROUND FACILITIES.

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

CITY OF OAKLAND
 TRANSPORTATION SERVICES DIVISION
 250 FRANK H. OGAWA PLAZA, SUITE 4344 • OAKLAND CA, 94612
 (510) 238-3466 • FAX (510) 238-7415

E18TH STREET IMPROVEMENT PROJECT



CIVIL ENGINEER	No.	DATE	BY	REFERENCE
RCE NO. _____ EXP. _____				
CHECKED BY AC				
DESIGNED BY EB				
DRAWN BY EB				

SIGNAL INTERCONNECT CABLE (SIC) PLAN
 AT
 LAKESHORE AVE/E.18TH ST TO
 PARK BLVD/E.21ST ST

PROJECT NO.
P233285

SCALE: 1" = 40'
 HOR: X"=X"
 VERT: X"=X"
 DATE: DEC 2010

SHEET NO.
TS-8
 45 OF 52

HALF SIZE

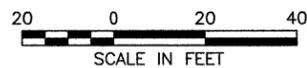
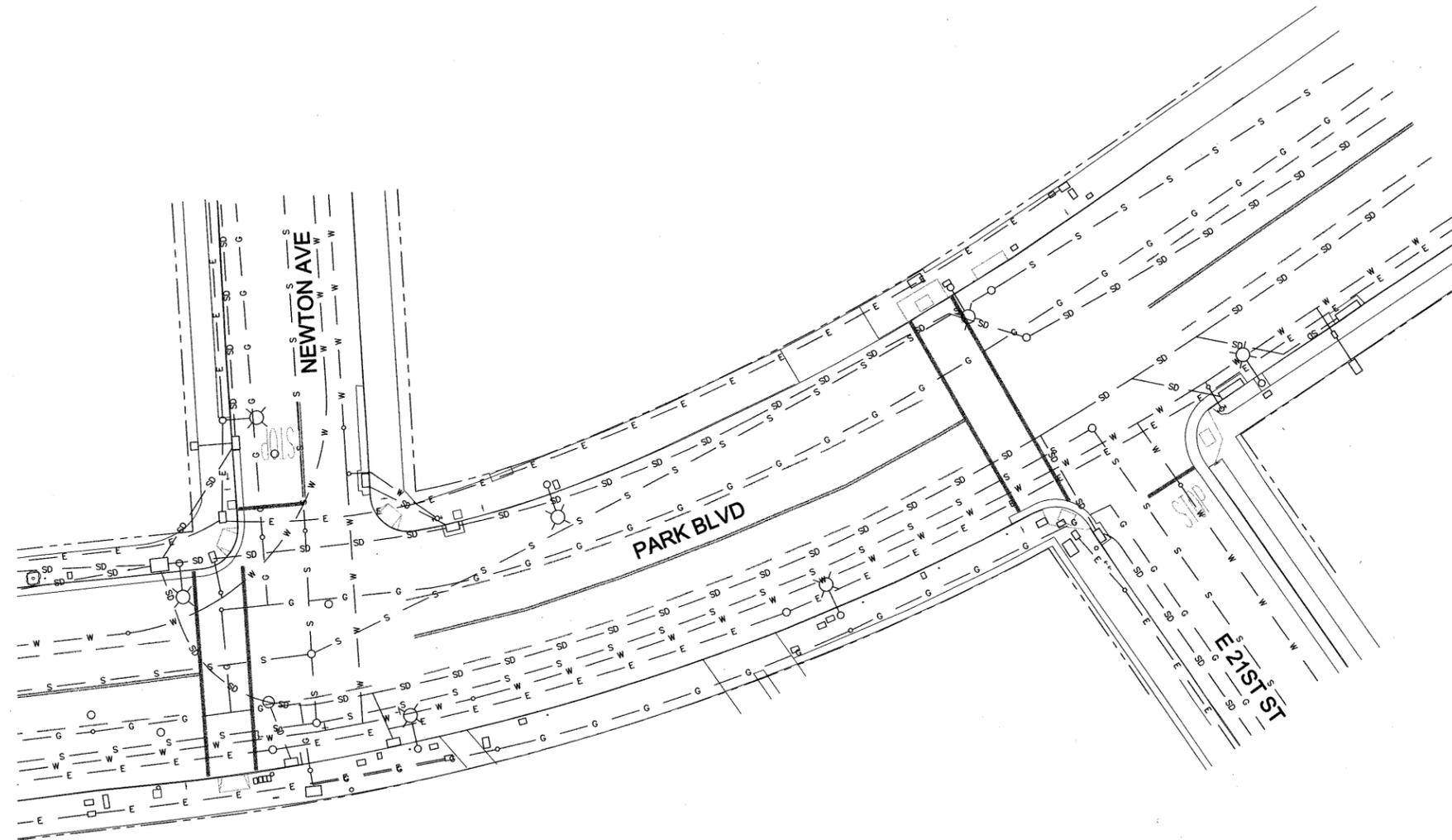
DRAWING NAME: P:\Divisions_and_Teams\Transportation\Projects\E 18th St Imp\Proj_Signal Mod\CAD\Sheet\TS-8.dwg
 PLOT DATE: 08-04-11
 PLOTTED BY: benton



THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA)
AND THE CITY PUBLIC WORKS AGENCY AT LEAST 48 HOURS
(2 WORKING DAYS) PRIOR TO BEGINNING ANY EXCAVATION
IN THE VICINITY OF UNDERGROUND FACILITIES. USA WILL MARK LOCATIONS OF
UTILITIES.

PROJECT NOTES:

1. THE LOCATION AND SIZE OF MAJOR UNDERGROUND FACILITIES AND UTILITIES SHOWN HEREON ARE SCHEMATIC IN NATURE. USING INFORMATION FURNISHED BY THE RESPECTIVE AGENCIES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DATA WITH THE RESPECTIVE AGENCIES AND TAKING PROPER PRECAUTIONS TO PROTECT AND AVOID THE EXISTING FACILITIES AND UTILITIES.
2. CONTRACTOR SHALL EXERCISE DUE CAUTION WHEN OVER OR AROUND EXISTING FACILITIES (CONDUITS, CULVERTS, UTILITIES, ETC). ANY DAMAGE TO NEW OR EXISTING FACILITIES RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (USA) AND THE CITY PUBLIC WORKS AGENCY AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO BEGINNING ANY EXCAVATION IN THE VICINITY OF UNDERGROUND FACILITIES. USA WILL MARK LOCATIONS OF UTILITIES.



E18TH STREET IMPROVEMENT PROJECT
TRAFFIC SIGNAL INSTALLATION
PROJECT NO. P233285



CITY OF OAKLAND
TRANSPORTATION SERVICES DIVISION
250 FRANK H. OGAWA PLAZA, SUITE 4344, OAKLAND CA. 94612
(510)238-3466 - FAX (510)238-7415



CIVIL ENGINEER	No.	DATE	BY	REFERENCE
RCE NO. _____ EXP. _____				
CHECKED BY AO				
DESIGNED BY JK				
DRAWN BY JK				

UTILITY PLAN
PARK BLVD / NEWTON AVE
PARK BLVD / E 21ST ST

SCALE:
HOR: 1"=20'
VERT:
DATE: 5/12/2010
SHEET NO.
TS-9
46 OF 52

HALF SIZE

PROJECT TITLE: P:\Divisions_and_Teams\Transportation\Projects\Traffic_Signals (NEW)\E 18th St Improvement Project\Drawings\TS-9.dwg
DRAWING NAME: TS-9.dwg
PLOT DATE: 05-10-11
PLOTTED BY: bentley

PROJECT NOTES:

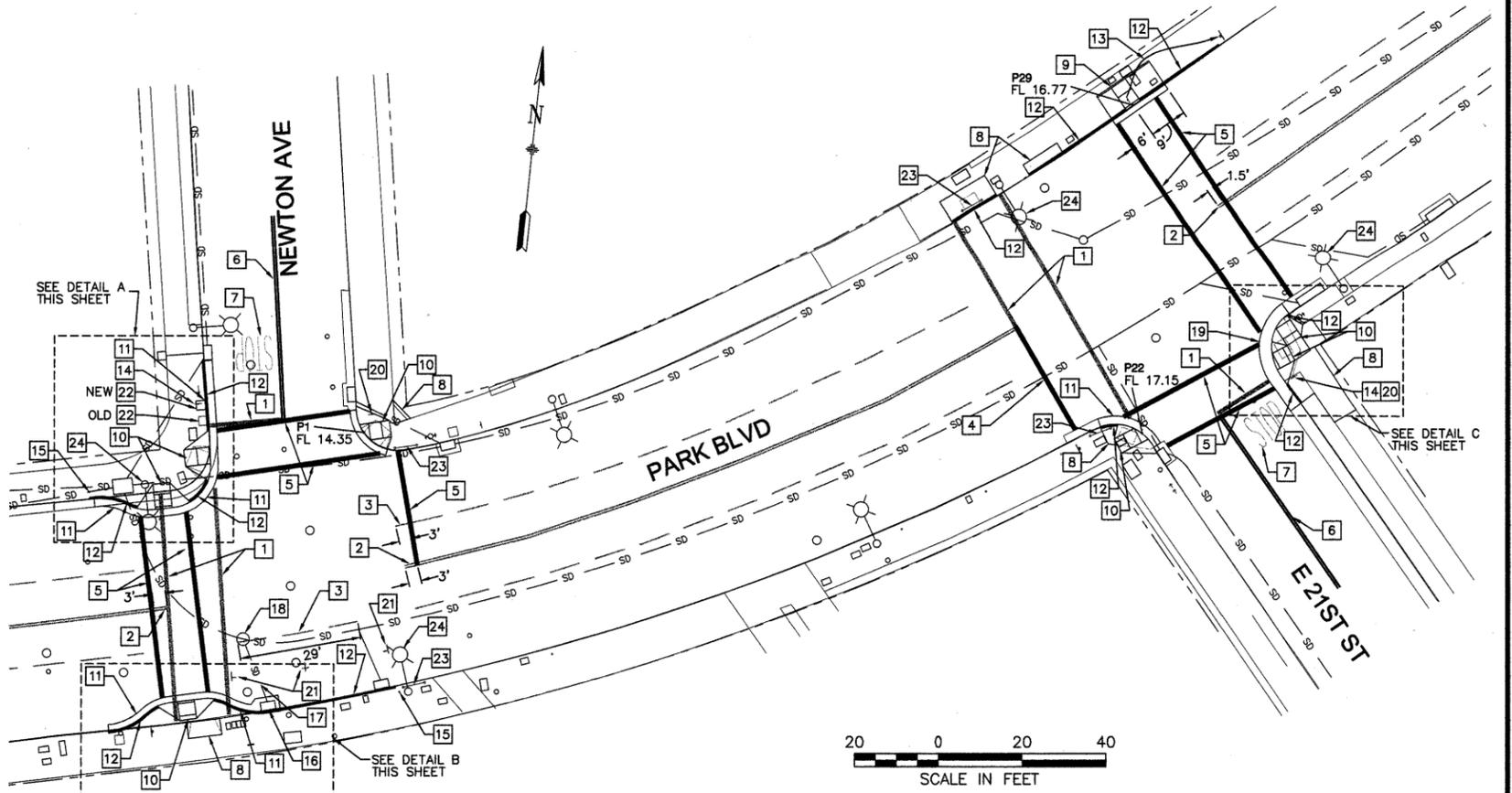
- ALL SIGNING, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO CALIFORNIA MUTCD AND CALTRANS STANDARD PLANS OR AS DIRECTED BY THE ENGINEER.
- REMOVE ALL PAVEMENT MARKINGS AND STRIPING THAT ARE IN CONFLICT WITH THE NEW CROSSWALKS.
- ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
- ALL CROSSWALKS AND LIMIT LINES SHALL BE 12" WIDE WHITE STRIPES EXCEPT AS NOTED. CROSSWALK WIDTH SHALL BE 11' ON CENTER UNLESS OTHERWISE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.
- ADJUSTMENT OF PG&E, PACIFIC BELL, AND EBMUD UTILITY BOXES TO FINISH GRADE SHALL BE COORDINATED BY THE CONTRACTOR AND PERFORMED BY THE CONTRACTOR.
- ADJUSTMENT OF ALL OTHER UTILITY BOXES TO FINISH GRADE INCLUDING SIGNALS, STREET LIGHTS, SANITARY OR STORM DRAIN, AND CLEAN OUTS SHALL BE PERFORMED BY THE CONTRACTOR.
- STOP SIGNS AND STENCILS ARE NOT TO BE REMOVED UNTIL SIGNAL LIGHTS HAVE BEEN INSTALLED.
- ALL SALVAGED SIGNS AND POSTS AND TRAFFIC SIGNAL EQUIPMENT SHALL BE DELIVERED BY THE CONTRACTOR TO TRAFFIC MAINTENANCE YARD AT 7101 EDGEWATER DRIVE, OAKLAND, CA.
- CONTRACTOR SHALL IMPLEMENT TRAFFIC CONTROL PLANS FOR TEMPORARY PEDESTRIAN WALKWAYS AS INDICATED IN THE SPECIFICATIONS.
- DETECTABLE WARNING DOMES SHALL BE CUT TO MATCH CURB ALIGNMENT.

CONSTRUCTION NOTES:

- REMOVE EXISTING 12" STRIPE
- REMOVE EXISTING DETAIL 21
- REMOVE EXISTING DETAIL 8
- EXISTING 12" STRIPE TO REMAIN
- INSTALL 12" STRIPE
- INSTALL 50' OF DETAIL 21
- REMOVE EXISTING STOP LEGEND
- REMOVE EXISTING WHEELCHAIR RAMP OR SIDEWALK AND INSTALL NEW SIDEWALK
- INSTALL CITY STANDARD CASE C WHEELCHAIR RAMP WITH CURB AND GUTTER
- INSTALL CITY STANDARD CASE E WHEELCHAIR RAMP WITH CURB AND GUTTER
- INSTALL NEW CURB AND GUTTER
- INSTALL RED CURB
- RELOCATE EXISTING SIGN AND POST PER CITY STD DETAIL T-4
- REMOVE EXISTING STOP SIGN AND POST AFTER SIGNAL TURN ON
- THE CITY SHALL REMOVE EXISTING PARKING METER. COORDINATE REMOVAL WITH CITY STAFF AT 510-238-2084
- INSTALL CITY STANDARD TYPE B INLET
- INSTALL 12" STORM DRAIN PIPE
- INSTALL CITY STANDARD TYPE 2 MANHOLE
- REPLACE 3' WIDE GUTTER TO MATCH EXISTING
- REMOVE EXISTING STREET NAME SIGN POST. RELOCATE PARK BLVD SIGN TO NEW TRAFFIC SIGNAL MAST ARM
- REMOVE PARKING TEE
- RELOCATE EXISTING TRASH CAN
- INSTALL PEDESTRIAN BARRICADE. POST R9-3a AND R9-3b SIGNS
- REMOVE AND SALVAGE ELECTROLIER. CONVERT TO #5 CURB BOX

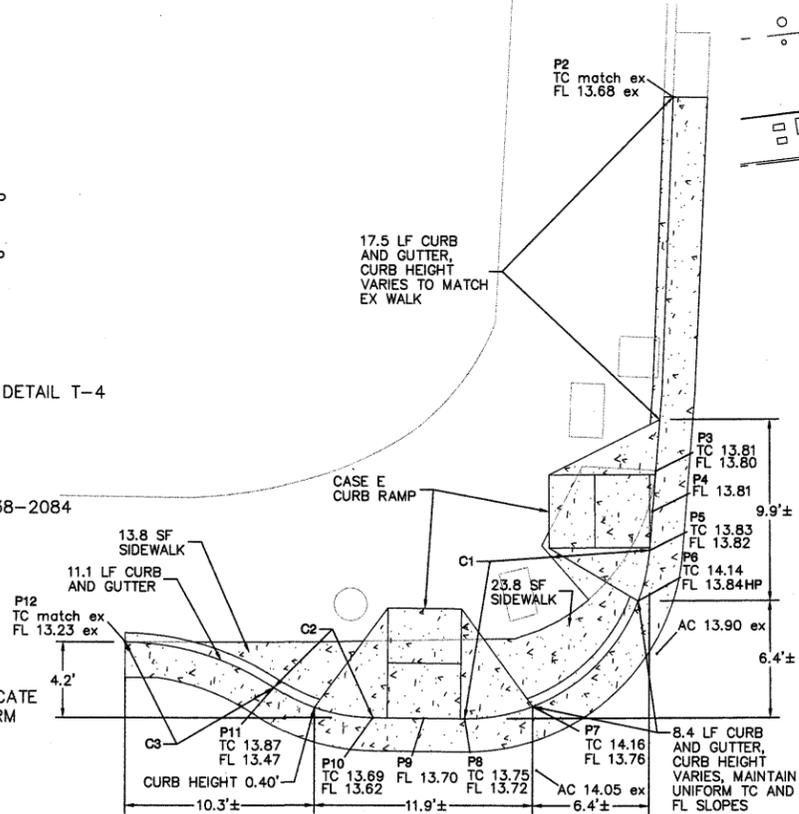
POINT TABLE

No.	NORTHING	EASTING	DESCRIPTION
P1	2118666.39	6056564.73	CL RAMP
P2	2118679.32	6056524.91	CONFORM
P3	2118659.29	6056528.49	POL
P4	2118657.10	6056528.80	CL RAMP
P5	2118654.98	6056529.11	BC
P6	2118652.12	6056529.11	HP GUTTER
P7	2118645.24	6056524.75	POC
P8	2118643.77	6056521.27	EC
P9	2118643.32	6056519.09	CL RAMP
P10	2118642.75	6056516.38	BC
P11	2118643.19	6056510.74	PRC
P12	2118643.87	6056502.28	EC
P13	2118589.36	6056511.66	BC
P14	2118594.31	6056520.02	PRC
P15	2118597.55	6056525.32	EC
P16	2118598.47	6056529.21	CL RAMP
P17	2118599.39	6056533.10	BC
P18	2118599.64	6056536.11	HP GUTTER
P19	2118598.87	6056539.30	PRC
P20	2118598.23	6056549.15	CL INL. EC
P21	2118598.98	6056551.79	CONFORM
P22	2118685.62	6056749.43	CL RAMP
P23	2118696.75	6056786.19	CONFORM
P24	2118702.75	6056780.89	BC
P25	2118705.84	6056778.97	CL RAMP
P26	2118710.53	6056777.95	PCC
P27	2118715.84	6056779.55	CL RAMP
P28	2118717.72	6056781.29	EC
P29	2118763.39	6056739.06	CL RAMP

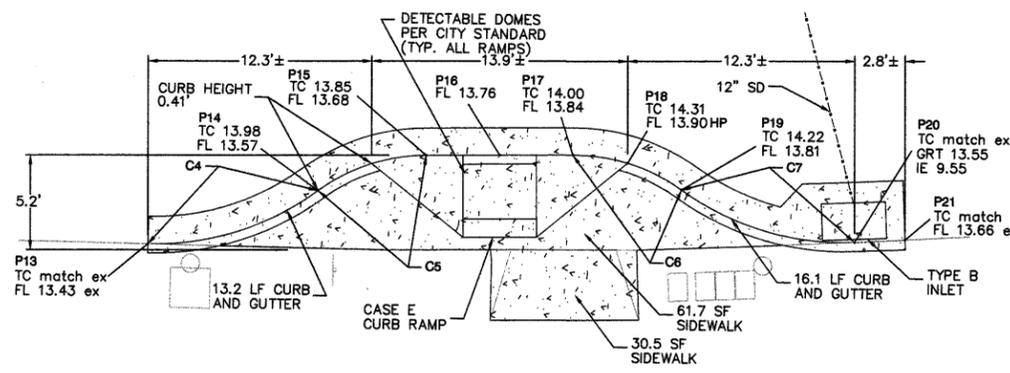


CURVE TABLE

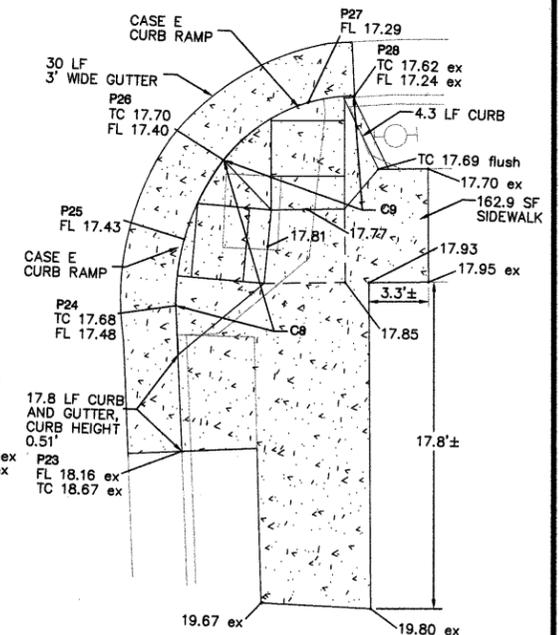
No.	RADIUS	DELTA	LENGTH
C1	10.00'	86.30'	15.06'
C2	10.00'	32.86'	5.74'
C3	15.00'	32.86'	8.60'
C4	15.00'	37.79'	9.89'
C5	10.00'	36.18'	6.32'
C6	10.00'	36.24'	6.33'
C7	15.00'	38.39'	10.05'
C8	12.37'	39.28'	8.48'
C9	8.98'	52.14'	8.17'



DETAIL A
SCALE: 1"=5'



DETAIL B
SCALE: 1"=5'



DETAIL C
SCALE: 1"=5'

**E18TH STREET IMPROVEMENT PROJECT
TRAFFIC SIGNAL INSTALLATION
PROJECT NO. P233285**



CITY OF OAKLAND
TRANSPORTATION SERVICES DIVISION
250 FRANK H. OGAWA PLAZA, SUITE 4344, OAKLAND CA. 94612
(510)238-3466 - FAX (510)238-7415



CIVIL ENGINEER	No.	DATE	BY	REFERENCE
RCE NO. _____ EXP. _____				
CHECKED BY AO				
DESIGNED BY JK				
DRAWN BY JK				

**STREET IMPROVEMENT
AND STRIPING PLAN
PARK BLVD / NEWTON AVE
PARK BLVD / E 21ST ST**

SCALE:
HOR: 1"=20'
VERT:
DATE: 5/12/2010

SHEET NO.
TS-10
47 OF 52

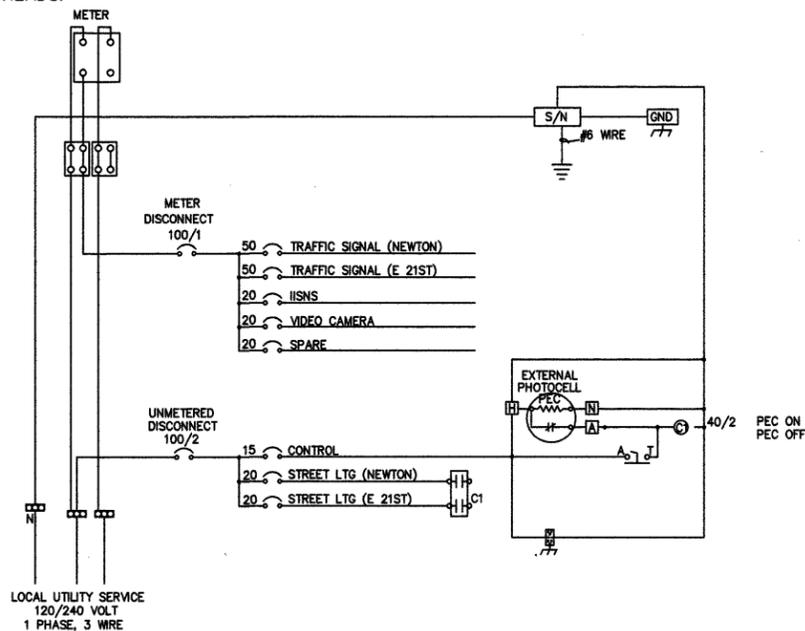
HALF SIZE

DRAWING NAME: P:\Divisions_and_Team\Transportation\Projects\Traffic_Signals (NEW)\E 18th St Improvement Project\dwg\TS1.dwg
PLOT DATE: 05-10-11
PLOT BY: bmb

POLE AND EQUIPMENT SCHEDULE

SIGNAL POLE	STANDARD			SIGNAL MOUNTING		PED PUSH BUTTON		AUDIBLE PED SIGNAL Ø	HPS LUMINAIRE WATTAGE	FOUNDATION DETAIL STD. DWG.	INTERNALLY ILLUMINATED STREET NAME SIGN (IISNS)	APS VERBAL MESSAGE		AUDIBLE SOUND
	TYPE	SIGNAL MAST ARM	LUMINAIRE MAST ARM	MAST ARM	POLE	Ø	ARROW					STREET BEING CROSSED	MESSAGE	
(A)	CALTRANS 19-4-100	25'	6'	M-2V	S-2V	-	-	-	200W	ES-7F	NEWTON AVE			
(B)	CALTRANS TYPE 1B	-	-	-	T-2V-1P	4P	←	-	-	ES-7B, 7M	-	PARK BLVD	CROSSING PARK BLVD	CUCKOO
(C)	CALTRANS 19-4-100	25'	6'	M-2V	S-1V-1P	4P	←	-	200W	ES-7F	NEWTON AVE	PARK BLVD	CROSSING PARK BLVD	CUCKOO
(D)	CALTRANS TYPE 1B	-	-	-	T-1V-1P	6P	→	-	-	ES-7B, 7M	-	NEWTON AVE	CROSSING NEWTON AVE	CHIRP-CHIRP
(E)	CALTRANS TYPE 1B	-	-	-	T-1V-1P	6P	→	-	-	ES-7B, 7M	-	NEWTON AVE	CROSSING NEWTON AVE	CHIRP-CHIRP

- NOTES**
- SEE SPECIAL PROVISIONS FOR LIST OF CITY-FURNISHED EQUIPMENT
 - 12" SIGNAL LENSE FOR ALL TRAFFIC SIGNAL HEADS
 - ALL STREET LIGHTS SHALL BE 240V.
 - BACKPLATES ONLY ON MAST ARM MOUNTED SIGNAL HEADS.



1 NEW TYPE IIIAF SERVICE ENCLOSURE DETAIL
NW CORNER OF PARK BLVD & NEWTON

- ENCLOSURE NOTES**
- EXTERIOR, GALV STEEL, AND INTERIOR 14 GA COLD ROLLED STEEL ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
 - CONSTRUCTION SHALL BE NEMA 3R, RAIN TIGHT.
 - ALL NUTS, BOLTS AND SCREWS SHALL BE STAINLESS STEEL.
 - NUTS, BOLTS & SCREWS SHALL NOT BE VISIBLE FROM OUTSIDE OF ENCLOSURE.
 - NAMEPLATES SHALL BE PROVIDED AS REQUIRED.
 - CONTROL WIRING SHALL BE MARKED AT BOTH ENDS BY PERMANENT WIRE MARKERS.
 - A PLASTIC COVERED WIRING DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE FRONT DOOR.
 - ENCLOSURE SHALL BE FACTORY WIRED AND CONFORM TO REQUIRED NEMA STANDARDS.
 - COLOR: BOXWOOD GREEN (RAL 6011)
 - FOUNDATION PER CALTRANS STANDARD ES-2D

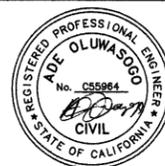
CABLE/CONDUCTOR SCHEDULE

CONDUCTOR DESIGNATION	No. OF CONDUCTORS/ RUN No.								
	1	2	3	4	5	6	7	8	
SIGNAL CABLE 12C#14 TS									
'A' CABLE --(Ø2,Ø4,NEUTRAL)	1		1	1	1				
'B' CABLE --(Ø4,Ø4P,Ø6,Ø6P,NEUTRAL)	1		1	1					
'C' CABLE --(Ø2,Ø4,Ø4P,Ø6P,NEUTRAL)	1	1							
TOTAL SIGNAL CABLES	3	1	2	2	1				
POLARA NAVIGATOR CONTROL BOARD (2-WIRE)									
3C#14 UF W/GRD									
(CONTROLS SPEAKER, LED, VIBRATOR AND PPB)									
PPB (Ø4P)	1		1		1				
PPB (Ø6P)	1	1	1	1					
TOTAL	2	1	2	1	1				
#14 CONDUCTORS THHN PEU			3						
VIDEO DETECTION (COAXIAL CABLES)									
Ø2	1		1	1	1				
Ø4	1		1	1	1				
Ø6	1		1						
TOTAL COAXIAL CABLE	3		3	2	2				
VIDEO POWER CABLE, 2C#12 UF W/GRND									
Ø2				1	1	1			
Ø4				1	1	1			
Ø6				1					
TOTAL				3	2	2			
#8 CONDUCTORS, THHN/THWN									
120V LIGHTING				2	2	2			
EQUIPMENT BOND WIRE (GRN)				1	1	1			
TOTAL #8				3	3	3			
#10 CONDUCTORS, THHN/THWN									
IISNS				2	2	2			
#6 CONDUCTORS									
FEEDER TO CONTROLLER (120V)-PARK AND NEWTON		2	2	2				2	
FEEDER TO CONTROLLER (120V)-PARK AND E 21ST						2	2	2	
SIGNAL INTERCONNECT							2	2	2
CONDUIT SIZE (INCHES)	3	3	3	3	3	3	3	3	3

**E18TH STREET IMPROVEMENT PROJECT
TRAFFIC SIGNAL INSTALLATION
PROJECT NO. P233285**



CITY OF OAKLAND
TRANSPORTATION SERVICES DIVISION
250 FRANK H. OGAWA PLAZA, SUITE 4344, OAKLAND CA. 94612
(510)238-3486 · FAX (510)238-7415



CIVIL ENGINEER	No.	DATE	BY	REFERENCE
RCE NO. _____ EXP. _____				
CHECKED BY AO				
DESIGNED BY JK				
DRAWN BY JK				

**POLE, EQUIPMENT AND
CABLE/CONDUCTOR SCHEDULES**
PARK BLVD / NEWTON AVE
PARK BLVD / E 21ST ST

SCALE:
HOR: NTS
VERT:
DATE: 5/12/2010
SHEET NO.
TS-12
49 OF 52

HALF SIZE

CONSTRUCTION NOTES:

1. INSTALL FOUNDATION FOR SIGNAL STANDARD PER POLE AND EQUIPMENT SCHEDULE ON SHEET 51.
2. INSTALL FOUNDATION FOR CALTRANS TYPE 332 CABINET PER CALTRANS STANDARD PLANS (JULY 2002) ES-3C. CABINET SHALL BE PAINTED BOXWOOD GREEN (RAL 6011).
3. INSTALL FOUNDATION FOR CALTRANS TYPE III-AF SERVICE PEDESTAL PER CALTRANS STANDARD PLANS (JULY 2002) ES-2C AND ES-2D.
4. INSTALL TYPE 2070 CONTROLLER ASSEMBLY AND CALTRANS TYPE 332 CABINET W/ LATEST BUILD OF NACTEC APOGEE SOFTWARE & HOMEBOX W/ 6" DOUBLE EXTENSIONS.
5. INSTALL CALTRANS TYPE III-AF 120/240V SERVICE ENCLOSURE.
6. INSTALL PG&E SPEC. BOX, AND BOX COVER SHALL BE MARKED "SERVICE". COORDINATE SERVICE CONNECTION FROM EXISTING POLE AND RISER WITH PG&E. INSTALL RISER STUB BETWEEN CURB BOX AND POLE.
7. INSTALL LED INTERNALLY ILLUMINATED STREET NAME SIGN (IISNS) ON SIGNAL MAST ARM. SEE DETAIL 1, SHEET 52.
8. INSTALL VIDEO DETECTION CAMERAS AND EVP'S, AND MOUNT AT BEST POSSIBLE LOCATIONS AS DIRECTED BY THE ENGINEER. LOCATIONS SHOWN ON DRAWING ARE ONLY SCHEMATIC. CAMERAS AND EVP'S SHALL BE PLACED ON LUMINAIRE ARMS UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
9. INSTALL GPS CLOCK, CABLE AND ANTENNA. DRILL MOUNTING HOLE FOR THE ANTENNA PER MANUFACTURER'S INSTRUCTIONS. INSTALL RG-6 ANTENNA CABLE TO CLOCK, AND AND GPS POWER CORD AND C2S CONNECTOR CABLE TO CONTROLLER, SEE DETAIL 3, SHEET 52. FOR POLARA CONTROL BOARD INSTALLATION LOCATIONS, SEE DETAIL 4, SHEET 52.
10. REMOVE AND SALVAGE EXISTING LUMINAIRE AND LUMINAIRE MAST ARM. REMOVE TOP 4" OF FOUNDATION. CONVERT TO #5 CURB BOX AND RECONNECT SL WIRING TO MAINTAIN CIRCUIT.
11. INSTALL ETHERNET OVER COPPER MODEM IN CONTROLLER.

PROJECT NOTES:

FOR TRAFFIC SIGNAL NOTES, SEE SHEET NO. TS-1.

POLE	PHASE	CABLE(S)	CONDUCTOR Nos.	SPLICE CHAMBER(S)
(A)	ø6 ø2P	A	2-6-4 9-10	A
(B)	ø8 ø8P	A	1-5-3 7-8	A
(C)	ø2 ø2P	B	2-6-4 9-10	B
(D)	ø2 ø8	B	2-6-4 1-5-3	B
(E)	ø6 ø8	C	2-6-4 1-5-3	C

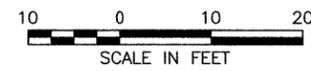
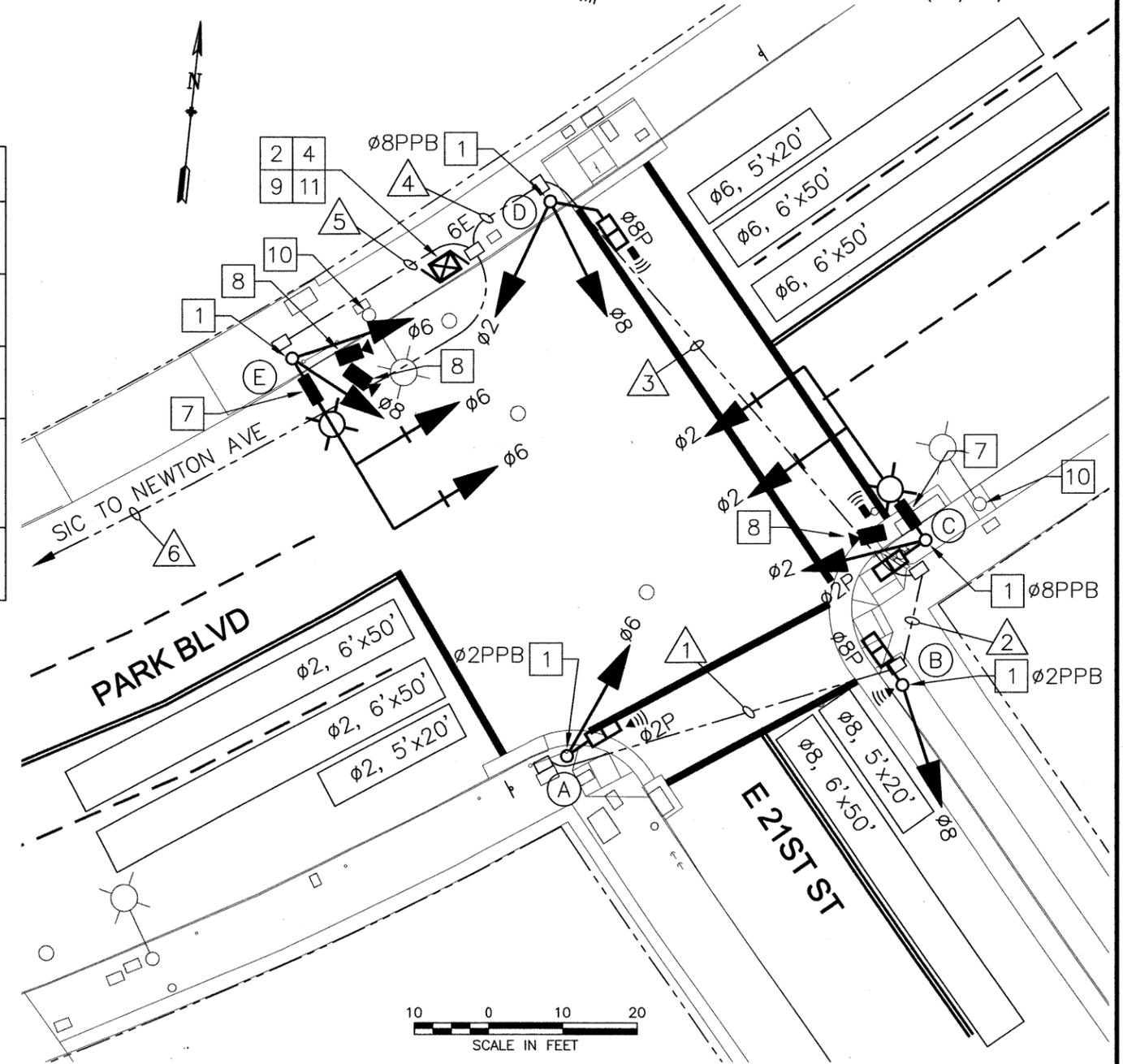
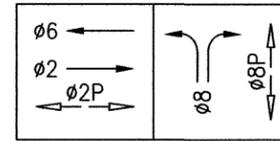
APPLICABLE CALTRANS STANDARDS

JULY 2006

ES-1A	ES-2D	ES-3C	ES-5A	ES-5D
ES-1B	ES-3A	ES-3D	ES-5B	ES-3D
ES-2C	ES-3B	ES-3E	ES-5C	

LEGEND:

- VIDEO DETECTION CAMERA, TO BE PLACED ON LUMINAIRE ARM
- VIDEO DETECTION ZONE
- LED IISNS, SEE DETAIL 1, SHEET X
- #6 PULL BOX
- AUDIBLE PEDESTRIAN SIGNAL "CUCKOO" (NORTH/SOUTH)
- AUDIBLE PEDESTRIAN SIGNAL "CHIRP-CHIRP" (EAST/WEST)



**E18TH STREET IMPROVEMENT PROJECT
TRAFFIC SIGNAL INSTALLATION
PROJECT NO. P233285**

CITY OF OAKLAND
TRANSPORTATION SERVICES DIVISION
250 FRANK H. OGAWA PLAZA, SUITE 4344, OAKLAND CA. 94612
(510)238-3466 - FAX (510)238-7415



CIVIL ENGINEER	No.	DATE	BY	REFERENCE
RCE NO. _____ EXP. _____				
CHECKED BY AO				
DESIGNED BY JK				
DRAWN BY JK				

**TRAFFIC SIGNAL PLAN
PARK BLVD / NEWTON AVE
PARK BLVD / E 21ST ST**

SCALE:
HOR: 1"=10'
VERT:
DATE: 5/12/2010

SHEET NO.
TS-13
50 OF 52

HALF SIZE

PROJECT TITLE: P:\Divisions_and_Terms\Transportation\Projects\Traffic Signal (NEW)\E 18th St Improvement Project\Drawings\TS1.dwg
DRAWING NAME: 02-14-11
PLOT DATE: 5/12/2010
PLOT BY: kalyaji