

TRAFFIC SIGNAL GENERAL NOTES:

- INSTALL SIGNALS HORIZONTALLY ON MAST ARM, 17 FT. – 6 IN ABOVE THE ROADWAY.
- LOCATE CONTROLLER, MAST ARM POLES, VIVDS CAMERAS, ETC. AS APPROVED.
- REMOVE THE EXISTING STOP SIGN(S) AND THOSE ITEMS DEEMED SALVAGEABLE BY THE ENGINEER. STOCKPILE THOSE ITEMS WITHIN THE RIGHT OF WAY. REMOVE AND DISPOSE OTHER ITEMS AT NO EXPENSE TO THE CITY.
- REPAIR OR REPLACE PAVEMENT AND SIDEWALKS DAMAGED BY THE CONTRACTOR’S FORCES DURING CONSTRUCTION AT NO COST TO THE CITY.
- PLACE THE PAVEMENT MARKINGS AS SHOWN ON THE PLANS OR AS DIRECTED.
- VERIFY THE CORRECT MAST ARM POLE LENGTHS FOR THE SIGNALIZED INTERSECTION PRIOR TO ORDERING THE EQUIPMENT.
- FURNISH VEHICLE AND PEDESTRIAN SIGNALS WITH LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS.
- FURNISH SYMBOL TYPE PEDESTRIAN COUNTDOWN SIGNALS. INSTALL USING MOUNTING HEIGHT IN ACCORDANCE WITH THE LATEST TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- FURNISH MATERIALS NECESSARY TO INSTALL ACCESSIBLE PEDESTRIAN SIGNAL UNITS AND SIGNS AS SHOWN IN THE PLANS. INSTALL AT 3 FT.–6 IN TO 4 FT.–0 IN.ABOVE THE SIDEWALK OR CONCRETE WALKWAY.
- FURNISH AND INSTALL FULL ACTUATED CONTROLLER WITH INTERNAL TIME BASE COORDINATION UNIT IN A BASE MOUNTED CABINET. THE FURNISHED CONTROLLER AND FIBER OPTIC COMPONENTS ARE TO BE COMPATIBLE WITH THE EXISTING CLOSED LOOP SYSTEM ALONG THE ROADWAY.
- CAP SPARE CONDUITS INSTALLED IN POLE FOUNDATIONS AND GROUND BOXES USING APPROVED CAPPING DEVICES.
- DO NOT PLACE THE SIGNAL HEADS OVER THE ROADWAY UNTIL ALL NECESSARY MATERIALS ARE ON HAND AS APPROVED BUT NO SOONER THAN 2–WEEKS BEFORE SIGNAL GOES ACTIVE.
- PROVIDE CONTINUED OPERATION OF THE EXISTING SIGNAL(S) DURING CONSTRUCTION AND UNTIL THE PROPOSED OPERATION IS COMPLETED.
- ONCE THE INTEGRITY AND/OR FUNCTION OF THE EXISTING TRAFFIC SIGNAL(S) IS ALTERED BY THE CONTRACTOR, MAINTAIN AND OPERATE THE EXISTING TRAFFIC SIGNAL(S) UNTIL THE TRAFFIC SIGNAL WORK IS ACCEPTED BY THE CITY. DURING THE CONSTRUCTION OF THE PROPOSED TRAFFIC SIGNAL WORK, MAINTAIN THE EXISTING TRAFFIC SIGNAL(S) AND/OR TEMPORARY CONSTRUCTION TRAFFIC SIGNAL(S) IN CONFORMANCE WITH THE LATEST TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- MAINTAIN THE INTEGRITY AND FUNCTION OF EACH EXISTING SIGNALIZED INTERSECTION. ONCE THE INTEGRITY OR FUNCTION OF THE SIGNAL HAS BEEN ALTERED, PURSUE THE WORK AT THAT LOCATION WITHOUT DELAY OR INTERRUPTION TO RESTORE OPERATION TO ITS ORIGINAL OR FINAL OPERATION DESIGN.
- INSTALL A 5/8 IN. (MINIMUM) EYE BOLT FOR THE POINT OF ATTACHMENT BELOW THE SERVICE ENTRANCE WEATHERHEAD FOR THE SERVICE DROP TO STEEL POLE.
- WRAP TRAFFIC AND PEDESTRIAN SIGNAL HEADS WITH DARK PLASTIC OR SUITABLE MATERIAL TO CONCEAL THE SIGNAL FACES FROM THE TIME OF INSTALLATION UNTIL PLACING INTO OPERATION.
- GROUND STEEL MAST ARM POLE ASSEMBLIES IN ACCORDANCE WITH REQUIREMENTS SHOWN ON THE LATEST TRAFFIC SIGNAL POLE FOUNDATION STANDARD. USE THE GROUNDING LUG ON THE POLE TO GROUND THE POLE TO THE GROUND CONDUCTORS FROM THE CONDUITS.
- INSTALL A CLOSE NIPPLE WITH LOCK NUT AND BUSHING (SIZE AS REQUIRED) WHERE THE CABLES ENTERS THE UPPER PORTION OF THE SIGNAL POLE.
- FURNISH VEHICLE DETECTION SYSTEM CABLE RECOMMENDED BY MANUFACTURER OR PURCHASE CABLE FROM THE SAME MANUFACTURER THAT SUPPLIED/PROVIDED THE EQUIPMENT.
- THE LOCATION OF THE DETECTION ZONE IS APPROXIMATE.THE EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER AND/OR THE CITY’S TRAFFIC OPERATION SECTION.
- GROUND ALL EXISTING METAL GROUND BOX COVERS AS OUTLINED ON LATEST TXDOT STANDARD DETAIL SHEETS. REPLACEMENT FOR THESE GROUND BOXES MUST BE MADE OF POLYMER CONCRETE AS DETAILED ON THE LATEST TXDOT STANDARD SHEET. THE MATERIALS AND LABOR ASSOCIATED WITH THIS WORK IS SUBSIDIARY TO VARIOUS BID ITEMS IN THE PROJECT.

- FURNISH BLACK HOUSING FOR VEHICLE AND PEDESTRIAN SIGNALS. FURNISH BLACK VEHICLE SIGNAL HEAD BACK PLATES.
- USE TYPE C HIGH SPECIFIC INTENSITY GRADE SHEETING FOR SIGNS MOUNTED UNDER OR ADJACENT TO THE SIGNAL HEADS.
- INSTALL A CONCRETE WALKWAY FROM THE END OF THE CURB RAMP OR EDGE OF PAVEMENT TO THE TRAFFIC SIGNAL POLE FOUNDATION TO PROVIDE ACCESS TO THE PEDESTRIAN PUSH BUTTON(S). PERFORM THIS WORK IN ACCORDANCE WITH ITEM, "CONCRETE SIDEWALKS".
- TRAFFIC OPERATION OFFICE WILL PROVIDE PHASING AND TIMING FOR PERMANENT TRAFFIC SIGNALS
- INSTALL TWO SET SCREWS ON ALL VEHICLE SIGNAL HEAD MOUNTING HARDWARE FITTINGS.
- FURNISH ALL TRAFFIC SIGNAL HEADS (HORIZONTAL OR VERTICAL) WITH BACKPLATES,2–INCH WIDE FLUORESCENT YELLOW. PLACE ON ALL APPROACHES. ELECTRICAL POWER TO OPERATE THE TRAFFIC SIGNAL INSTALLATION(S) WILL BE PLACED IN CONTRACTOR’S NAME DURING CONSTRUCTION AND FINALLY TRANSFERED TO THE CITY. THIS INCLUDES ALL POWER TO OPERATE THE SIGNAL(S) DURING THE VARIOUS PHASES OF CONSTRUCTION AND DURING THE TEST PERIOD PRIOR TO ACCEPTANCE OF THE WORK BY THE CITY.
- REMOVE THE EXISTING PAVEMENT MARKING AS SHOWN ON PLANS OR AS DIRECTED. REMOVE THE PAVEMENT MARKINGS TO THE EXTENT THAT THEY ARE EITHER COMPLETELY REMOVED OR OBLITERATED TO THE SATISFACTION OF THE ENGINEER
- ROUTE CABLE FOR LUMINAIRES (#12/4C – TRAY CABLE) TO THE SERVICE ENCLOSURE.
- PROVIDE L.E.D. LUMINAIRES OPERATING AT 120 VOLTS PER CITY’S STANDARD.
- PROVIDE WIND DAMPERS ON ALL MAST ARMS.

CITY OF PEARLAND TRAFFIC SIGNAL EQUIPMENT LIST

THE CITY OF PEARLAND APPROVES THE USE OF TRAFFIC SIGNAL EQUIPMENT AND MATERIALS PRE–QUALIFIED BY THE TEXAS DEPARTMENT OF TRANSPORTATION EXCEPT FOR THE ONES LISTED BELOW.

- TRAFFIC SIGNAL CABINET: NEMA TS–2 TYPE 1, 68” TALL
MANUFACTURER: CONTACT CITY OF PEARLAND TRAFFIC DEPARMENT FOR APPROVAL.
- VEHICLE DETECTION SYSTEM: CONTACT THE CITY OF PEARLAND TRAFFIC DEPARMENT FOR LATEST VEHICLE DETECTION SYSTEM.
- WIRELESS SWITCH
MANUFACTURER: CISCO
MODEL: SEE TABLE ON THIS SHEET FOR LIST OF EQUIPMENTS
- MALFUNCTION MANAGEMENT UNIT (MMU)
MANUFACTURER: TRAFFICWARE
TYPE: MMU 516L–E LCD WITH ETHERNET
- BATTERY BACKUP SYSTEM
MANUFACTURER: APC
MODEL: 1300W
- TRAFFIC SIGNAL POLES, MAST ARMS, AND PEDESTRIAN POLES TO BE SPECIAL NOSTALGIA DESIGN TRAFFIC POLES (AS MANUFACTURED BY UNION METAL CORP., OR VALMONT STRUCTURE, OR EQUAL) AND APPROVED BY THE CITY OF PEARLAND TRAFFIC DEPARTMENT.

NOTES:

- ALL THE TRAFFIC SIGNAL SUBMITTALS ARE SUBJECT TO BE REVIEWED AND APPROVED BY THE COP TRAFFIC DEPARTMENT.

Item	Part #	Qty.	Description per intersection Switch Switch Equipment
9124AXE Outdoor AP			
1	C9124AXE-B	1	Wi-Fi 6 Outdoor AP, External Ant, -B Regulatory Domain
2	CON-3SNT-C9BB4AXE	1	3YR SNTC 8X5XNBD Wi-Fi 6 Outdoor AP, External Ant, -B
3	NETWORK-PNP-LIC	1	Network Plug-n-Play Connect for zero-touch device
4	PI-LFAS-AP-T	1	Prime AP Term Licenses
5	PI-LFAS-AP-T-3Y	1	PI Dev Lic for Lifecycle & Assurance Term 3Y
6	AIR-DNA-A-T	1	Wireless Cisco DNA On-Prem Advantage, Term, Tracker Lic
7	AIR-DNA-A-T-3Y	1	Wireless Cisco DNA On-Prem Advantage, 3Y Term, Tracker
8	AIR-DNA-NWSTACK-A	1	AIR CISCO DNA Perpetual Network Stack
9	CDNA-A-C9124	1	Wireless Cisco DNA On-Prem Advantage, 9124 Tracking
10	DNA-A-3Y-C9124	1	C9124AX Cisco DNA On-Prem Advantage 3Y Term,Trk Lic
11	SW9124AXE-CW-K9	1	Capwap software for Catalyst 9124AX
12	AIR-MNT-VERT1	1	Vertical pole/wall mounting kit for Catalyst APs
13	AIR-ANT2568VG-NS	4	2.4GHz 6dBi/ 5GHz 8dBi Dual Band Omni Antenna N
14	AIR-DNA-A	1	Wireless Cisco DNA On-Prem Advantage, Term Lic
15	AIR-DNA-A-3Y	1	Wireless Cisco DNA On-Prem Advantage, 3Y Term Lic
16	D-CISCODNAS-ACT-T	1	Cisco DNA Spaces Act Term License for Cisco DNA
17	D-CISCODNAS-ACT-	1	Cisco DNA Spaces ACT for Cisco DNA - 3Year
18	AIR-MNT-VERT2=	1	Vert. pole/wall, with AC/DC adapter mount, for Catalyst 9124
19	AIR-MNT-HORZ1=	1	Horizontal pole/wall mounting kit for Catalyst 9124AX
20	AIR-ACC-PS-MNT1=	1	AC/DC adapter mount bracket for AIR-MNT-HORZ1=
21	AIR-MNT-ART1=	1	Vert. pole/wall mount Kit for Catalyst 9124AX w/ tilt adjust
22	AIR-PWRINJ-60RGD1=	1	Power Injector, 60W, outdoor, North America plug
23	AIR-PWRINJ-60-PMK=	1	Pole Mount kit for AIR-PWRINJ-60
24	AIR-PWRADPT-RGD2=	1	Power Adapter for AP, no AC connector
25	AIR-ACC-CAT6=	1	RJ45 gland for use with Cat 6/6a cabling - 5 pack
26	AIR-ACC-KIT1=	1	Accessory kit for Catalyst 9124AX
27	AIR-SFP-KIT1=	1	SFP installation kit for Catalyst 9124AX
28	AIR-ACC245LA-N=	1	2.4 and 5 GHz Lightning Arrestor, N Connector
IE 3300 DNA Advantage 5 Year Term license			
1	IE-3300-8U2X-A	1	Catalyst IE3300 w/ 8 GE Copper (4PPoE) & 2 10G SFP,
2	IE3300-NW-A	1	Cisco Network Advantage license for IE3300 Series
3	PWR-IE480W-PCAC-L	1	480W AC Power Supply (Lite)
4	IOT-SMART-CITIES	1	Smart Cities and Communities Solutions; For tracking only.
5	IOT-ROADWAYS	1	Connected Roadways: Intersections, Tolling; Tracking only
6	IE3300X_SW	1	Software for Catalyst IE3300 10G Rugged series
7	DIGITAL-DL-CODE	1	Digital Download Code for Software License
8	IE3300-DNA-A	1	Cisco DNA Advantage license for IE3300 Series
9	IE3300-DNA-A-5Y	1	IE 3300 DNA Advantage 5 Year Term license
10	IEM-3300-8S=	1	Catalyst IE3300 with 8 GE SFP Fiber ports, Expansion
11	SFP-10G-LR-X=	2	10GBASE-LR SFP Module for Extended Temp range

PLEASE READ THE APPLICABLE COP SPECIFICATION SECTIONS FOR DETAILED INFORMATION.

THIS DETAIL SHEET HAS BEEN PREPARED FOR USE ON STANDARD CITY OF PEARLAND PROJECTS. AN ENGINEER WHO INCORPORATES THE DETAILS ON THIS SHEET BECOMES RESPONSIBLE FOR ITS USE IN THE END PRODUCT IN ACCORDANCE WITH RULE 137.33 (b) AND (c) OF THE TEXAS STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS.



City of Pearland, Texas

STANDARD DETAILS

TRAFFIC SIGNAL GENERAL NOTES AND EQUIPMENT LISTS

Job No.:	Scale:	SHEET
Date: October 2022	HORZ: 1"=NONE VERT: 1"=NONE	1
Own By: YR	CAD FILE:	OF 1
Chkd By: RS	COP— TSGN	