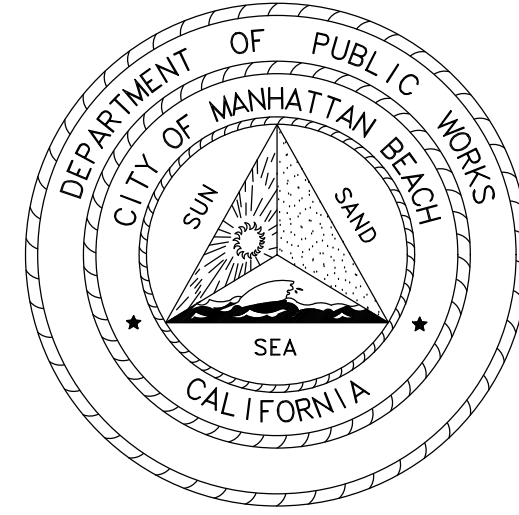


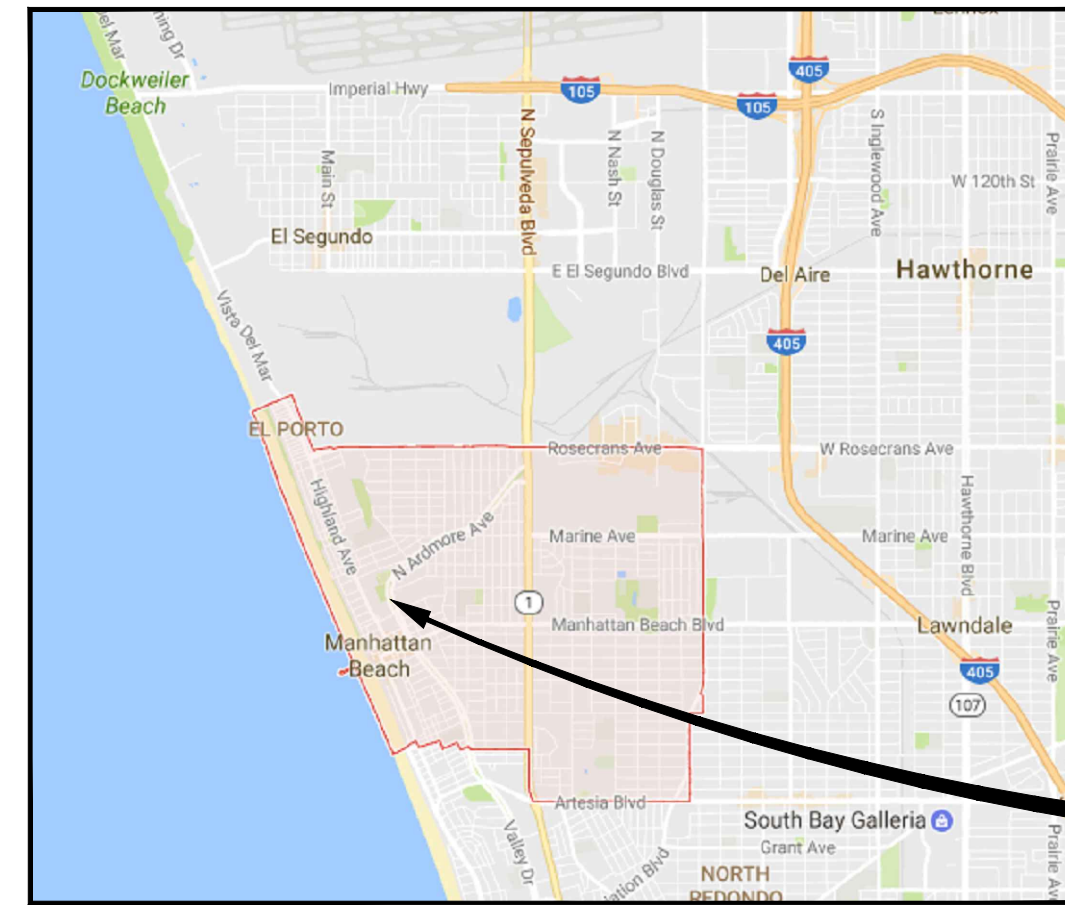
# CITY OF MANHATTAN BEACH

## PLANS FOR

### (CITY CAPITAL IMPROVEMENT PROJECT TITLE)



**PUBLIC WORKS DEPARTMENT**  
**3621 BELL AVENUE**  
**MANHATTAN BEACH, CALIFORNIA 90266**



PROJECT SITE

INDEX OF DRAWINGS	
DWG. NO. X-XXX1	DESCRIPTION
1	TITLE SHEET
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5-8	TRAFFIC RRFB PLANS
9-12	STREET IMPROVEMENT PLANS
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TOTAL SHEETS = 14	

**STANDARD PLANS:**

CITY OF MANHATTAN BEACH STANDARD PLANS

- MBSI-112A-0(ST-2) STANDARD SIDEWALK
- MBSI-120A-0(ST-3) STANDARD CURB AND GUTTER
- MBSI-122A-0(ST-12) STANDARD CROSS-GUTTER
- MBSI-174A-0(ST-27) CONTINENTAL CROSSWALK MARKINGS
- MBLT-414A-0 SIGN POST INSTALLATION

STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

- 120-3 CURB AND GUTTER - BARRIER
- 122-3 CROSS AND LONGITUDINAL GUTTERS
- 170-0 PAVEMENT MARKERS AND TRAFFIC LINES
- 171-0 PAVEMENT MARKINGS - ARROWS AND SYMBOLS

CALTRANS STANDARD PLANS

- A24D PAVEMENT MARKINGS - WORDS
- A24E PAVEMENT MARKINGS - WORDS
- A88A CURB RAMP DETAILS
- A90A ACCESSIBLE PARKING OFF-STREET
- A90B ACCESSIBLE PARKING ON-STREET



**LOCATION MAP**  
NOT TO SCALE

THOMAS GUIDE:  
PAGE 732, GRID 6F

WORK SITE LOCATION

**PROJECT UTILITY CONTACTS**

CITY OF MANHATTAN BEACH (PUBLIC WORKS DEPARTMENT)...ERICK LEE.....	(310) 802-5303
CITY OF MANHATTAN BEACH (POLICE DEPARTMENT)...DERRICK ABELL.....	(310) 802-5103
CITY OF MANHATTAN BEACH (FIRE DEPARTMENT).....	(310) 802-5203
COUNTY SANITATION DISTRICT (COMPTON)...ENGINEERING	
COUNTER.....	(562) 908-4288 (Ext. 1204 or 1205)
AT&T DISTRIBUTION...SUBSTRUCTURE RECORDS REQUEST CONSTRUCTION & ENGINEERING.....	(510) 645-2929
WEST BASIN MUNICIPAL WATER DISTRICT...FRANK FUCHS.....	(310) 660-6255
WEST BASIN MUNICIPAL WATER DISTRICT - INFRAMARK, LLC (RECYCLED WATER PIPELINE MAINTENANCE).....	(310) 217-2417
LA COUNTY PUBLIC WORKS - FLOOD MAINTENANCE...EDUARDO IVASAN or AHMET TATILIOVLO.....	(562) 861-0316
NEXTGLAVEN NETWORK...BRYANT LOWE.....	(724) 416-2193
SHELL OIL...CLARINDA MALDONADO.....	(310) 816-2063
ZENITH ENERGY.....	(800) 708-5071
SOUTHERN CALIFORNIA GAS COMPANY...GUILLERMO TEJEDA.....	(310) 687-2014
SOUTHERN CALIFORNIA EDISON...KRIS WALSH.....	(949) 533-6137
SPECTRUM (TIME WARNER CABLE)...ANTHONY XANPHIS.....	(310) 750-9185
T-MOBILE...SHAWN HENDERSON.....	(805) 279-3513
FRONTIER COMMUNICATION (PREVIOUSLY VERIZON)...DAN HAYES.....	(310) 793-4159
VERIZON (XO COMMUNICATIONS).....	(949) 417-7841

**PROFESSIONAL ENGINEER'S NOTE:**

THE PLANS AND SPECIFICATIONS HAVE BEEN PREPARED BY THE ENGINEER OF RECORD USING AVAILABLE RECORD PLANS AND MAPS AND BASED ON FIELD RECONNAISSANCE OF EXISTING CONDITIONS. KNOWN UTILITIES AND OWNERS OF OTHER STRUCTURES HAVE BEEN GIVEN WRITTEN NOTICE OF THE PROJECT. HOWEVER, THE ENGINEER OF RECORD AND CITY OF MANHATTAN BEACH ARE NOT RESPONSIBLE FOR THE TOTAL ACCURACY AND/OR CORRECTNESS OF THE SHOWN INFORMATION. THE CONTRACTOR, BY SIGNING THE CONSTRUCTION CONTRACT FOR THIS PROJECT, ACCEPTS AND ASSUMES FULL RESPONSIBILITY FOR THE WORK AND ITS IMPACT ON THE EXISTING FACILITIES WHETHER SHOWN OR NOT ON THESE PLANS AND DESCRIBED IN THE SPECIFICATIONS.

THE CONTRACTOR IS RESPONSIBLE TO MAKE HIS OWN INVESTIGATION AND INSPECTION INCLUDING POTHOLING AND SUCH OTHER METHODS HE DEEMS NECESSARY TO ALLOW HIM TO PROCEED ON THE CONSTRUCTION OF THIS PROJECT IN COMPLIANCE WITH THE LAWS, ORDINANCES, REGULATIONS AND CITY STANDARDS APPLICABLE TO THE PROJECT, INCLUDING STATE SAFETY ORDERS AND PROCEDURES OF USA.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ANY SURVEYS REQUIRED TO ESTABLISH HORIZONTAL AND VERTICAL CONTROLS PRIOR TO AND DURING CONSTRUCTION, AND TO REPLACE DISTURBED OR COVERED EXISTING SURVEY MONUMENTS AT HIS EXPENSE. MONUMENT RESTORATION/REPLACEMENT TO BE RECORDED.

THE PLANS HAVE BEEN APPROVED BY THE MANHATTAN BEACH PUBLIC WORKS DIRECTOR.

*Erick Lee*  
 PUBLIC WORKS DIRECTOR  
 ERICK LEE  
 06/22/2023  
 DATE

**DECLARATION OF DESIGN ENGINEER OF RECORD**

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF THE DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE FOR SUCH DESIGN. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH CHECK DOES NOT, THEREFORE RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS. I ALSO HEREBY DECLARE THAT I HAVE COMPARED THESE PLANS WITH ALL APPLICABLE ADA TITLE II REQUIREMENTS FOR DISABILITY ACCESS FOR THIS PROJECT AND THESE PLANS ARE IN FULL COMPLIANCE WITH THOSE REQUIREMENTS.

*Paul Frislie*  
 SIGNATURE  
 05-18-23  
 DATE

**CITY OF MANHATTAN BEACH**  
PUBLIC WORKS DEPARTMENT - ENGINEERING DIVISION

**CROSSWALK IMPROVEMENT PROJECT**

REVISIONS			
NO.	DESCRIPTION	BY	DATE
REFERENCES			

REVIEWED BY: _____ PROJECT MANAGER HELEN SHI 6/22/2023 DATE	RECOMMENDED BY: <i>Katherine Doherty</i> CITY ENGINEER KATHERINE DOHERTY 6/22/2023 DATE
DESIGNED BY: <i>Paul Frislie</i> DESIGN ENGINEER PAUL FRISLIE 05-18-23 DATE	SCALE: NTS DATE: 05-12-23 DRAWING NO.: T-264 SHEET 1 OF 14

NO WORK SHALL BE DONE ON THIS SITE UNTIL USA AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE, TWO WORKING DAYS BEFORE YOU DIG.

**SUPPLEMENTAL NOTES:**

- THE CONTRACTOR SHALL LOCATE, VERIFY AND PROTECT ALL EXISTING UNDERGROUND UTILITIES. DAMAGED UTILITIES SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
- DUE TO INDIVIDUAL LOT IMPROVEMENTS, THE EXISTING WATER, SEWER AND/OR GAS LATERALS MAY NOT BE AT THE LOCATIONS SHOWN OR SHOWN IN THEIR ENTIRETY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING.
- THE CONTRACTOR SHALL DETERMINE THE DEPTH OF THE GAS, OCE, CABLE, SEWER, STORM DRAIN AND WATER AT ALL INTERSECTIONS AND INTERFERENCES PRIOR TO CONSTRUCTION AND AS NOTED ON PLANS.

05-18-23  
DATE SIGNED

PLANS PREPARED BY:

1700 Camino Avenue, Suite 100  
 Santa Ana, CA 92705-5551  
 Phone: (949) 270-9488  
 Fax: (949) 270-9481

REVIEWED BY	DATE



**WATER NOTES: (MUST USE ALL NOTES ON THIS SHEET FOR ALL PLANS)**

- GENERAL:**
1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, FIRE AND POLICE DEPARTMENT AT LEAST 72 HOURS PRIOR TO SHUTTING DOWN ANY WATER MAINS, FIRE HYDRANTS OR BLOCKING ACCESS TO ANY AREA. FIRE HYDRANT SHALL NOT BE OUT OF SERVICE FOR MORE THAN FOUR (4) HOURS AND NONE SHALL BE OUT OF SERVICE OVERNIGHT OR DURING WEEKENDS.
  2. THE CONTRACTOR SHALL FIELD VERIFY AND PROTECT ALL EXISTING UNDERGROUND UTILITIES. THE CONTRACTOR SHALL DETERMINE THE DEPTH OF GAS, ELECTRICAL, TELEPHONE, TELEVISION, STORM DRAIN, SEWER AND WATER AT ALL INTERSECTIONS PRIOR TO CONSTRUCTION AND AS NOTED ON PLANS. DAMAGED UTILITIES SHALL BE REPLACED IN KIND UNDER THE SUPERVISION OF THE OWNER AT CONTRACTOR'S EXPENSE.
  3. DUE TO INDIVIDUAL LOT IMPROVEMENTS, THE EXISTING SEWER, GAS LATERALS AND/OR ELECTRICAL UNDERGROUNDING MAY NOT BE AT LOCATIONS SHOWN OR SHOWN IN THEIR ENTIRETY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING.
  4. PRIOR TO SHUT DOWN AND CUTTING OF ANY EXISTING WATER MAIN, ALL EXISTING VALVES SHALL BE EXERCISED BY CITY PERSONNEL. THE CONTRACTOR SHALL NOTIFY THE CITY'S DEPARTMENT OF PUBLIC WORKS, WATER DIVISION INSPECTION SUPERVISOR A MINIMUM OF FOUR DAYS PRIOR TO COORDINATE THE SHUT DOWN OF ANY WATER MAIN.
  5. CONTRACTOR SHALL PROTECT IN PLACE THE EXISTING SURVEY MONUMENTS DURING WATER MAIN CONSTRUCTION. IF MONUMENTS ARE DESTROYED, THE CONTRACTOR SHALL SURVEY AND RESET RECORDED MONUMENTS.

- DUCTILE IRON PIPE:**
6. ALL D.I.P. WATER LINES AND FITTINGS SHALL BE CEMENT LINED DOUBLE THICKNESS, CLASS 50 PRESSURE CLASS WITH POLYETHYLENE ENCASUREMENT AND COMPLY WITH ANSI A.21.51 (AWWA C 151).
  7. STATIC WATER PRESSURE IN VICINITY IS SHOWN FOR LOW AND HIGH ELEVATIONS ON THE PLANS. (REFER TO TOP OR BOTTOM OF SHEETS)
  8. PIPE MATERIALS AND INSTALLATION SHALL BE IN ACCORDANCE WITH THESE CONSTRUCTION DOCUMENTS AND THE MANUFACTURER'S RECOMMENDATIONS.
  9. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES EXCEPT AT POINTS OF CONNECTION TO EXISTING WATER MAINS.
  10. THE CONTRACTOR MAY VARY THE GRADE IN THE ALIGNMENT OF THE WATERLINE IF FIELD CONDITIONS WARRANT WITH THE APPROVAL OF THE ENGINEER.
  11. PIPE DEFLECTIONS SHALL NOT EXCEED 80% OF THE MANUFACTURER'S RECOMMENDED ALLOWABLE DEFLECTIONS FOR DUCTILE IRON PIPE AND FITTINGS INSTALLATION.
  12. A MINIMUM OF 12-INCHES CLEARANCE BETWEEN THE EXISTING UTILITIES AND PROPOSED PIPELINES SHALL BE MAINTAINED AT CROSSINGS. UTILITIES SHALL BE SUPPORTED AS REQUIRED BY THE ENGINEER AND IN ACCORDANCE WITH AFWA STD. DWG. 224-2 AND CITY OF MANHATTAN BEACH STD. DWG. ST-26.
  13. THE OPEN ENDS OF ALL ABANDONED WATER LINES SHALL BE PLUGGED WITH CONCRETE. THE LOCATION OF THE CONCRETE PLUGS SHALL BE APPROVED BY THE CITY ENGINEER IN THE FIELD.
  14. ALL EXCAVATIONS FOR THE INSTALLATION OF THE MAIN LINE PIPE AND SERVICES, INSTALLATION OF COMBINATION AIR VACUUM AND AIR RELEASE VALVES, INSTALLATION OF END OF LINE FLUSH-OUTS, AND ABANDONMENT OF EXISTING WATER MAINS SHALL BE BACKFILLED PER CITY OF MANHATTAN BEACH STD. DWG. MBSJ-132A(ST-10).

- FITTINGS:**
15. ALL FITTINGS AND MECHANICAL JOINTS SHALL BE DUCTILE IRON UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER. ALL RESTRAINED JOINTS AS SHOWN SHALL BE CONSTRUCTED WITH RESTRAINTS (MEGALUG OR FIELD-LOK GASKETS).
  16. ALL DUCTILE IRON TEES AND CROSSES SHALL BE CLASS 350 FLANGE FITTINGS UNLESS OTHERWISE NOTED ON PLANS. ALL OTHER DUCTILE IRON FITTINGS SHALL BE CLASSED 350 WITH PUSH-ON JOINTS UNLESS OTHERWISE NOTED PLANS. PROVIDED FITTINGS WITH ENDS THAT ARE COMPATIBLE WITH MECHANICAL RESTRAINTS WHERE RESTRAINED JOINTS ARE REQUIRED.
  17. ALL TEES SHALL BE INSTALLED WITH 45 DEGREE SLEEVES TO FINISH GRADE UPON COMPLETION OF REPAVING.
  18. CONTRACTOR SHALL FURNISH ALL FITTINGS NECESSARY FOR DEVIATION OF PIPE ALIGNMENT NOT SHOWN ON PLANS.

- VALVES:**
19. ALL VALVES SHALL BE GATE VALVES. VALVE ASSEMBLIES SHALL BE PER CITY STANDARDS.
  20. GATE VALVES SHALL BE PLACED WITH OPERATING NUT EITHER NORTH OR WEST OF THE WATER MAIN.
  21. ALL VALVES CONNECTING TO TEES, CROSSES AND REDUCERS SHALL HAVE FLANGED OR FLANGED X PUSH-ON ENDS.
  22. NO VALVE SHALL BE LOCATED WITH A GUTTER OR OTHER CONCRETE DRAINAGE DEVICE, ALLEY GUTTERS, DRIVEWAY AND ALLEY APPROACHES OR SIDEWALKS, UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE CITY ENGINEER.
  23. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES AND SERVICES PRIOR TO THE START OF ANY REPAVING.
  24. EXISTING PIPE, TEES, CROSSES AND OTHER FITTINGS WHICH INTERFERE WITH THE PROPOSED WATER SYSTEM IMPROVEMENTS SHALL BE REMOVED AND DISPOSED OF PROPERLY OR SALVAGED AS DIRECTED BY THE ENGINEER.
  25. EXISTING VALVES SHALL BE SALVAGED UNDER DIRECTION OF THE ENGINEER. VALVE CANS SHALL BE REMOVED, BACKFILLED AND PAVED OVER.

- AIR VALVES AND PUMP WELLS:**
26. THE CONTRACTOR SHALL CONSTRUCT A COMBINATION AIR/VAC AIR RELEASE VALVE ASSEMBLY PER CITY STANDARDS AT ALL HIGH POINTS IN THE ALIGNMENT WHETHER OR NOT SHOWN ON THESE DRAWINGS.
  27. CONTRACTOR SHALL CONSTRUCT A BLOW-OFF ASSEMBLY PER CITY STANDARDS AT ALL LOW POINTS IN THE ALIGNMENT WHETHER OR NOT SHOWN ON THESE DRAWINGS.

- FIRE HYDRANTS:**
28. ALL FIRE HYDRANTS, VALVES AND OTHER ASSOCIATED FACILITIES SHALL BE LOCATED IN THE FIELD AS DIRECTED BY THE ENGINEER. THE LOCATION SHOWN ON THESE PLANS ARE APPROXIMATE.
  29. REMOVAL OF THE EXISTING FIRE HYDRANTS WILL INCLUDE CUTTING FIRE HYDRANT BURY TWO FEET (2'-0") BELOW EXISTING GRADE AND BACKFILLING WITH CONCRETE. SALVAGED FIRE HYDRANTS SHALL BE DELIVERED TO THE CITY WATER DIVISION.
  30. FIRE HYDRANT INSTALLATIONS SHALL INCLUDE NEW 6---INCH LATERALS, VALVES WITH 6" x 6" x 6" OR 8" x 6" x 8" TEE. SEE CITY OF MANHATTAN BEACH STD DWG MEWS-701A(ST-16).

- WATER SERVICES AND METERS:**
31. ALL WATER SERVICES AND FIRE LINES SHALL BE REPLACED FROM THE NEW WATER LINE UP TO THE METER PER DETAILS MODIFIED ST-15 AND ST-22.
  32. CONTRACTOR SHALL LOCATE AND FIELD VERIFY ALL WATER SERVICE CONNECTIONS AND FIRE LINE SERVICES SIZES AND LOCATIONS PRIOR TO COMMENCING WORK ON PROJECT.
  33. WATER SERVICE SHALL NOT BE CONSTRUCTED LESS THAN 18 INCHES FROM ANOTHER WATER SERVICE AND WATER MAIN JOINT.
  34. CONTRACTOR SHALL PROVIDE ALL NECESSARY FITTINGS, ADAPTERS, REDUCERS, AND/OR COUPLINGS NECESSARY TO CONNECT TO EXISTING PIPING AND METERS.

- POTHOLES/UTILITIES:**
35. THE CONTRACTOR SHALL POTHOLE ALL TIE IN CONNECTION LOCATIONS, PRIOR TO CONSTRUCTION TO FIELD VERIFY THE ACTUAL SIZE, DEPTH, AND ROUNDNESS OF THE EXISTING WATER SYSTEM. THE TIE IN WILL BE APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
  36. EXISTING UTILITIES SHALL BE MAINTAINED IN PLACE UNLESS OTHERWISE SHOWN.
  37. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS A MINIMUM DISTANCE OF 200 FEET IN ADVANCE OF WATER MAIN TRENCHING TO DETERMINE THE EXACT LOCATION AND VERIFY THE MATERIAL, SIZE, DEPTH AND ROUNDNESS OF ALL PARALLEL AND CROSSING UTILITIES WITHIN THE ALIGNMENTS OF THE NEW WATER MAIN. PIPE JOINTS SHALL BE DEFLECTED A MAXIMUM 80% OF MANUFACTURER'S RECOMMENDATION TO CLEAR INTERFERENCES WITH KNOWN OBSTRUCTIONS OR OTHER UTILITIES WHICH ARE SHOWN OR NOT SHOWN ON THE PLAN UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY INFORMATION GATHERED DEVIATING FROM PLANS SHALL BE CONVEYED TO THE ENGINEER IN WRITING.
  38. FAILURE TO COMPLY WITH ANY OF THE ABOVE ITEMS SHALL BE SUFFICIENT CAUSE FOR THE AGENCY TO ARRANGE FOR THE NECESSARY WORK TO BE PERFORMED BY OTHERS. ANY COSTS INCURRED TO COMPLETE THE NECESSARY WORK WILL BE CHARGED TO THE CONTRACTOR.

- CONNECTIONS:**
39. CONTRACTOR SHALL RECONNECT ALL EXISTING SERVICES INCLUDING WATER SERVICE AND FIRE PROTECTION SERVICE CONNECTIONS FROM THE ABANDONED OR REPLACED WATER MAIN TO THE NEW WATER MAIN. THE CONTRACTOR SHALL ALSO PROVIDE ALL REQUIRED TEES, BLIND FLANGES, CAPS, FITTINGS, PIPE AND RESTRAINED JOINT CONNECTIONS REQUIRED TO RECONNECT ALL SERVICES CONNECTIONS TO THE NEW WATER MAIN PER CITY OF MANHATTAN BEACH STANDARDS. WATER AND FIRE SERVICE CONNECTIONS HAVE NOT BEEN SHOWN IN DETAIL FOR PLAN CLARITY.
  40. AT CONNECTION POINTS, THE CONTRACTOR SHALL REMOVE INTERFERING EXISTING PIPING AND VALVES AND INSTALL FITTINGS, VALVES AND MAKE UP SPOOL PIECES AND JOIN PIPE ENDS WITH TRANSITION COUPLINGS.
  41. CONNECTIONS TO EXISTING WATER MAIN SHALL BE ACCORDING TO TYPICAL CITY STANDARDS.
  42. REFER TO CONNECTIONS SHOWN ON CITY STANDARDS.
  43. THRUST BLOCK OR RESTRAINING DEVICES SHALL BE INSTALLED ON BOTH SIDES OF ALL FITTINGS, VALVES, PLUGS, AND DEAD ENDS, AND ALL DIRECTION CHANGES. THRUST BLOCKS SHALL BE PER CITY OF MANHATTAN BEACH STD. DWG. (ST-20). THE REQUIRED RESTRAINED LENGTH FITTINGS SHALL BE PER CITY STANDARDS, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.
  44. DUAL PURPOSE COUPLING TRANSITION FITTINGS SHALL BE USED FOR CIP/DIP TRANSITIONS FOR 12" OR LARGER.

- RESTRAINTS/THRUST BLOCKS:**
45. THRUST BLOCKS SHALL BE CONSTRUCTED PER CITY OF MANHATTAN BEACH STD. DWG. ST-20.
  46. ALL NEW AND EXISTING WATER MAINS SHALL BE PROPERLY RESTRAINED BY THE CONTRACTOR DURING CONSTRUCTION AND HYDROSTATIC TESTING.
  47. ALL FIRE SERVICE CONNECTIONS SHALL BE RESTRAINED.

- TESTING/DISINFECTION:**
48. THE CONTRACTOR SHALL DEMONSTRATE TO THE ENGINEER THAT ALL WATER MAINS HAVE BEEN RELIEVED OF ENTRAPPED AIR BY HOLDING HYDROSTATIC PRESSURE IN PIPELINES BEING TESTED A MINIMUM OF 4 HOURS PER AWWA C600.
  49. ALL WATER LINE INSTALLATIONS SHALL BE FREE OF DEBRIS AND ORGANIC MATERIALS. THE PIPE SHALL BE PRESSURE AND LEAKAGE TESTED, FLUSHED AND CHLORINATED. CHLORINATING SHALL BE IN ACCORDANCE WITH THE STATE OF CALIFORNIA HEALTH DEPARTMENT, CONSISTING OF NOT LESS THAN 50 PPM INITIAL DOSAGE, WITH NOT LESS THAN 25 PPM RESIDUAL DOSAGE AFTER 24 HOURS. INSTALLATIONS SHALL BE FLUSHED AND A 48 HOUR BACTI TEST SHALL BE REQUIRED PRIOR TO PRESSURE TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE ALL BACTERIOLOGICAL TESTING BY A CERTIFIED LABORATORY. THE CONTRACTOR SHALL NOT HAVE CUSTODY OF THE WATER SAMPLES AT ANY TIME. ALL TESTING METHODS AND RESULTS SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER PRIOR TO CONNECTING THE NEW WATER MAIN TO THE CITY'S WATER SYSTEM.
  50. ALL BACTI AND PRESSURE TESTS SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO PLACEMENT OF PERMANENT RESURFACING.

- HIGH LINING (BY-PASS):**
51. THE CONTRACTOR SHALL INSTALL BY-PASS LINES AS SHOWN AND PER SPECIFICATIONS. THE MINIMUM BY-PASS PIPING SIZE SHALL EQUAL THE SIZE OF THE MAIN TO BE REPLACED.
  52. BY-PASS WATER PLANS SHALL BE PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER FOR ALL WATER MAINS TO BE REMOVED AND REPLACED PER PLAN. ALL BY-PASS PLANS SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND COORDINATED AND APPROVED WITH THE CITY FIRE MARSHALL.

- ABANDONMENT:**
53. WHERE THE NEW WATER MAIN REPLACES AN EXISTING MAIN, THE EXISTING MAIN SHALL BE ABANDONED IN PLACE AND THE ENDS SHALL BE FILLED WITH 2 FEET MINIMUM OF SLURRY, CAPPED OR PLUGGED PROPERLY AND SECURED WITH CONCRETE PRIOR TO BACKFILLING.
  54. REPLACED WATER SERVICES SHALL BE REMOVED.

- SEPARATIONS:**
55. ALL WATER MAIN SEPARATIONS SHALL COMPLY WITH DEPARTMENT OF HEALTH SERVICES GUIDANCE CRITERIA AND DIVISION OF DRINKING WATER (DDW) FOR THE SEPARATION OF WATER MAINS AD NON-POTABLE PIPELINES (LATEST ADDITION) AND CITY OF MANHATTAN BEACH STD. DWG. ST-26. THE MORE STRINGENT OF THE TWO SHALL GOVERN.

56. WHEREVER A WATER LINE CROSSES A SEWER LINE, VERTICAL SEPARATION SHALL NOT BE LESS THAN 4 INCHES. WHERE THE SEPARATION IS BETWEEN 4 INCHES AND ONE (1) FOOT, THE CONTRACTOR SHALL INSTALL THE WATER MAIN SO THAT A 16 FOOT SECTION OF PIPE IS CENTERED AT THE SEWER LINE, AND THERE SHALL NOT BE A PIPE JOINT WITHIN 8 FEET. SEE CITY OF MANHATTAN BEACH STD. DWG. ST-26.
57. IN AREAS WHERE THE PIPELINE IS INSTALLED ABOVE AN EXISTING STORM DRAIN, THE CONTRACTOR SHALL MAINTAIN A MINIMUM VERTICAL CLEARANCE OF 12 INCHES BETWEEN THE TOP OF STORM DRAIN AND THE BOTTOM OF THE PIPELINE. IF A 12 INCH CLEARANCE CANNOT BE MAINTAINED, PIPE SHALL BE CONCRETE ENCASED ACROSS THE STORM DRAIN, PLUS 3 FEET ON BOTH SIDES. SEE CITY OF MANHATTAN BEACH STD. DWG. ST-26.
58. WHERE THE NEW WATER MAIN ENCOACHES WITH 4 FEET OF AN EXISTING SEWER OUTER DIAMETER SPECIAL CONSTRUCTION WILL BE REQUIRED BY CONSTRUCTING A CASING PIPE FOR THE NEW WATER MAIN. SEE CITY OF MANHATTAN BEACH STD. DWG. ST-26.

- TRENCHING AND BACKFILLING:**
59. NO MECHANICAL EQUIPMENT IS PERMITTED TO OPERATE WITHIN THREE FEET OF A GAS LINE AND ANY CLOSER WORK MUST BE DONE BY HAND.

**SEWER NOTES:**

1. THE CONTRACTOR'S ATTENTION IS CALLED TO CONTRACT SPECIFICATION'S SPECIAL PROVISION, PART 3, SECTION 306-1.2.15 CONVEYANCE OF SEWAGE FLOWS.
2. THE LOCATIONS OF EXISTING UTILITIES AND HOUSE LATERALS SHOWN ARE BASED ON CCTV INSPECTIONS AND PREVIOUS RECORDS. IT MAY OR MAY NOT BE ACCURATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND EXPOSE ALL EXISTING LATERALS TO DETERMINE EXACT LOCATION AND DEPTHS TO WHICH THE CONNECTIONS ARE TO BE MADE.
3. AN EXISTING SEWER TO BE REPLACED SHALL BE CUT AND PLUGGED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, SECTION 306-5 AND 306-6.
4. EXISTING DOWNSTREAM MANHOLES SHALL BE BULKHEADED WITH BRICK AND MORTAR OR PLUGS APPROVED BY THE ENGINEER AT NEW INLET DURING CONSTRUCTION OF NEW UPSTREAM LINES. BRICK AND MORTAR OR PLUG SHALL BE REMOVED IN THE PRESENCE OF THE ENGINEER DURING CLEARING OF THE FIRST UPSTREAM SECTION OF THE NEW SYSTEM.
5. THE NEW MAIN AND LATERALS SHALL BE PRESSURE TESTED IN ACCORDANCE WITH SECTION 306.1.4.4 OF THE STANDARD SPECIFICATIONS.
6. MANHOLE FRAMES AND COVERS SHALL HAVE NO LOCKING FEATURES AND CONFORM TO THE CITY OF MANHATTAN BEACH STANDARD DWG. MBSS-210A (ST-19). A FOUNDRY IDENTIFICATION MARK SHALL BE LOCATED ON THE BOTTOM OF THE COVER AND INSIDE THE FRAME.
7. WHENEVER THE INVERT ELEVATION OF THE EXISTING AND THE NEW SEWER ARE THE SAME, THE LATERALS SHALL BE ANGLED TOWARD THE DOWNSTREAM DIRECTION AT THE MAXIMUM SLOPE POSSIBLE.
8. THE CONTRACTOR SHALL ADJUST ALL NEW SEWER MANHOLE FRAME COVERS TO FINISHED PAVEMENT GRADE.
9. ALL LATERAL LOCATIONS SHALL BE CLEARLY MARKED WITH A 2 INCH HIGH "S" CHISELED IN THE CURB FACE BY THE CONTRACTOR, WITH EXCEPTION AT PRIVATE IMPROVEMENTS IN ENCOACHMENT AREAS.
10. STATIONS SHOWN THUS 0+00 AS SHOWN ON THE PLAN AND PROFILE ARE SEWER STATIONS FROM RECORDED DRAWINGS AND ARE INDEPENDENT OF STREET STATIONS AND ARE STATIONS ALONG CENTERLINE OF SEWER. THESE MAY VARY FROM CCTV DERIVED DISTANCES.
11. SEWER LINE DISTANCE SHOWN IN PLAN AND PROFILE IS THE HORIZONTAL DISTANCE MEASURED BETWEEN MANHOLES.
12. SEWER MAIN CONSTRUCTION SHALL BE MONITORED BY VIDEOTAPE EQUIPMENT & THE VIDEOTAPE SHALL BE PROVIDED TO CITY ENGINEER STATIONING IS TO SHOW ON VIDEOTAPE.
13. MANHOLE CONES FOR REPLACEMENT MANHOLES SHALL BE SET STRAIGHT SIDE UPSTREAM. MANHOLE STEPS SHALL BE MADE OF STEEL REINFORCED POLYPROPYLENE.
14. ALL VCP AND FITTINGS SHALL BE CLASS DESIGNATED "EXTRA-STRENGTH" AND TESTED IN ACCORDANCE WITH ASTM C-700 AND PER CITY STANDARDS.
15. IF A POWERPOLE IS WITHIN THREE FEET OF THE SEWER, THE SEWER SHALL BE ENCASED PER LACDPW STANDARD PLAN 2023-2, CASE II, TWO FEET ON EACH SIDE FROM THE POINT OF INTERFERENCE.
16. ALL JOINTS BETWEEN VITRIFIED CLAY PIPE AND OR PVC SEWER PIPE SHALL BE MADE WITH A RUBBER SLEEVE JOINT, TYPE "D" (WITH BUSHING IF NECESSARY) PER "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" SECTION 208-2.
17. WYE FITTINGS SHALL BE USED FOR LATERAL CONNECTIONS TO THE MAINLINE SEWERS EXCEPT AS NOTED.
18. NEW PIPE AND NEW MANHOLE BEDDING SHALL BE INSTALLED PER CITY OF MANHATTAN BEACH STANDARD DWG MBSJ-132A (ST-10).
19. CONTRACTOR TO COAT OUTSIDE OF ALL NEW SANITARY SEWER MANHOLES WITH WATERPROOF MEMBRANES.
20. ALL NEW SANITARY SEWER MANHOLE FRAMES AND COVERS SHALL BE WATERTIGHT.
21. PRIOR TO ACCEPTANCE OF ANY SANITARY SEWER LINE BY THE CITY OF MANHATTAN BEACH, AN INSPECTION OF SAID LINE BY VIDEO INCLUDING MANHOLES SHALL BE REQUIRED PER PROVISIONS OF SECTION 500-1.1.15 OF THE SSPWC. THE RESULTS OF THE VIDEO AND MANDREL INSPECTION SHALL BE RECORDED IN DVD FORMAT AND A COPY SHALL BE PROVIDED TO THE CITY. THIS INCLUDES REPAIRED, LINED & REPLACED SEWERS.

PRIOR TO THE ACCEPTANCE OF ANY SANITARY SEWER LINE BY THE CITY OF MANHATTAN BEACH AN INSPECTION OF SAID LINE BY VIDEO SHALL BE REQUIRED AS PART OF COST FOR PROJECT TO THE CITY. ALL NEW REPAIRED & LINED SEWERS SHALL BE VIDEO INSPECTED. THE CCTV INSPECTION SHALL BE COMPLETED BY A CERTIFIED NATIONAL ASSOCIATION OF SEWER SERVICE COMPANY (NASSCO), PIPELINE ASSESSMENT AND CERTIFICATION PROGRAM (PACP) SHALL BE PERFORMED BY TRAINED OPERATORS(S) USING ESTABLISHED PACP CODING AND OBSERVATIONS. THE RESULTS OF THE VIDEO INSPECTION SHALL BE RECORDED IN DVD FORMAT AND A COPY SHALL BE PROVIDED TO THE CITY DEPARTMENT OF PUBLIC WORKS FOR REVIEW AND APPROVAL. ANY NOTED DEFICIENCIES SHALL BE CORRECTED, THEN FOLLOWED BY A POST CORRECTION VIDEO TO BE SUBMITTED FOR REVIEW AND APPROVAL. THE CONTRACTOR OF THE PROJECT SHALL NOTIFY THE CITY OF MANHATTAN BEACH IN WRITING AT LEAST 48 HOURS (2 WORKING DAYS) IN ADVANCE OF THE SCHEDULED DATE AND TIME OF ANY VIDEO INSPECTIONS.

22. THE CONTRACTOR SHALL CHECK EACH LATERAL FOR THE PRESENCE OF A BACKWATER VALVE. WHICH SHALL BE REPLACED IF DAMAGED.
23. THE CONTRACTOR SHALL REVIEW CCTV TO LOCATE EXISTING SEWER LATERALS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
24. WHERE KNOWN, LOCATIONS OF SEWER LATERALS ARE SHOWN ON PLANS. HOWEVER, CONTRACTOR SHALL RECONNECT ALL FOUND LATERALS.
25. AS DIRECTED BY THE ENGINEER, CONTRACTOR SHALL SALVAGE ALL EXISTING MANHOLE COVERS AND FRAMES AND DELIVER THEM TO THE CITY YARD.
26. CONNECTION TO EXISTING CITY MANHOLES, WHERE STUBS DO NOT EXIST OF CORRECT SIZE, SHALL BE DONE BY CORE DRILLING.
27. MAINTAIN SEWER FLOW AT ALL TIMES DURING CONSTRUCTION IN SEWER MAINS AND LATERALS BY USE OF BYPASS SYSTEM INCLUDING PUMPING.
28. ANY EXISTING BACKWATER VALVE BWV SHALL BE REPLACED AS PART OF THIS PROJECT. INSTALL NEW BWV WHERE REQUIRED PER SECTION 710 OF THE PLUMBING CODE.

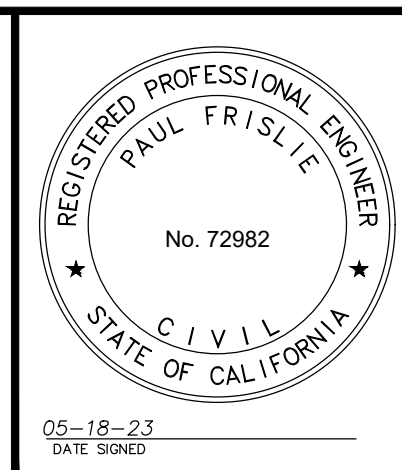
**ROADWAY RECONSTRUCTION GENERAL NOTES:**

1. CURB AND GUTTER AND RAMP TO BE REPLACED TO MATCH EXISTING AND IN ACCORDANCE WITH CITY STANDARD DRAWING AND "GREEN BOOK" STANDARDS.
2. JOIN NEW CURB AND GUTTER TO ASPHALT PAVEMENT PER DETAILS SHOWN OR REFERENCED. CONSTRUCT CURB AND GUTTER PER THE "GREEN BOOK" STD PLAN 120-2 AND CITY REQUIREMENTS UNLESS OTHERWISE SHOWN.
3. JOIN NEW ASPHALT PAVING TO CURB AND GUTTER PER DETAILS SHOWN OR REFERENCED. PRIME ALL AREAS TO BE JOINED. SAW CUT ALL CONCRETE AND ASPHALT PAVING TO BE JOINED PRIOR TO DEMOLITION AND REMOVALS.
4. ANY NEW CURB AND GUTTER CONSTRUCTED AT EXISTING ASPHALT WEARING COURSE SHALL BE JOINED WITH A MINIMUM SIX INCH NOTCH PER STANDARD DETAIL.
5. DRIVEWAY APPROACHES DISTURBED BY THE WORK SHALL BE REPLACED PER DETAILS HEREIN OR GREEN BOOK STANDARDS.

NO WORK SHALL BE DONE ON THIS SITE UNTIL USA AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE, TWO WORKING DAYS BEFORE YOU DIG.

**SUPPLEMENTAL NOTES:**

1. THE CONTRACTOR SHALL LOCATE, VERIFY AND PROTECT ALL EXISTING UNDERGROUND UTILITIES. DAMAGED UTILITIES SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
2. DUE TO INDIVIDUAL LOT IMPROVEMENTS, THE EXISTING WATER, SEWER AND/OR GAS LATERALS MAY NOT BE AT THE LOCATIONS SHOWN OR SHOWN IN THEIR ENTIRETY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING.
3. THE CONTRACTOR SHALL DETERMINE THE DEPTH OF THE GAS SCE, CABLE, SEWER, STORM DRAIN AND WATER AT ALL INTERSECTIONS AND INTERFERENCES PRIOR TO CONSTRUCTION AND AS NOTED ON PLANS.



PLANS PREPARED BY:  
**iteris**  
1700 Carnegie Avenue, Suite 100  
Vista, CA 92083-0551  
Phone: (848) 275-8480  
Fax: (848) 270-6461


REVIEWED BY	DATE

<b>CITY OF MANHATTAN BEACH</b> PUBLIC WORKS DEPARTMENT – ENGINEERING DIVISION			
<b>CROSSWALK IMPROVEMENT PROJECT</b>			
<b>REVISIONS</b>		<b>UTILITY SHEET</b>	
NO.	DESCRIPTION	BY	DATE
<b>REFERENCES</b>		REVIEWED BY: <i>V-shi</i> PROJECT MANAGER HELEN SHI DATE: 6/22/2023	RECOMMENDED BY: <i>Katherine Doherty</i> CITY ENGINEER KATHERINE DOHERTY DATE: 6/22/2023
DESIGNED BY:	SCALE:	DATE:	DRAWING NO.:
<i>Paul Frislie</i> DESIGN ENGINEER PAUL FRISLIE	NTS	05-18-23	T-264
SHEET 3 OF 14			

**GRADING GENERAL NOTES:**

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST ADOPTED VERSION AND AMENDMENTS OF THE CALIFORNIA BUILDING CODE. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE APPLICABLE CITY/COUNTY STANDARDS AND STANDARD SPECIFICATIONS, LATEST ADOPTED EDITION AND AMENDMENTS. IF THERE IS A CONFLICT BETWEEN CODES, THE CONTRACTOR WILL NOTIFY THE CIVIL ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEARING AND DISPOSAL OF THE PROPOSED WORK AREA. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIAL LEGALLY AND IS RESPONSIBLE FOR COMPLYING WITH LOCAL RECYCLING ORDINANCES.
3. NO FILL SHALL BE PLACED ON THE EXISTING GROUND SURFACE UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL, DELETERIOUS MATERIAL AND SCARIFIED AND COMPACTED PER THE GEOTECHNICAL RECOMMENDATIONS.
4. CUT AND FILL SLOPES SHALL BE NO STEEPER THAN TWO FEET HORIZONTAL TO ONE FOOT VERTICAL, 2:1.
5. FILLS SHALL BE COMPACTED TO THE MINIMUM PERCENTAGE OF MAXIMUM DRY DENSITY AS SPECIFIED IN THE PROJECT SOILS REPORT AND CERTIFIED BY THE GEOTECHNICAL ENGINEER.
6. ALL EXISTING FILLS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER BEFORE ANY ADDITIONAL FILLS ARE ADDED.
7. ALL EXPOSED SLOPES SHALL BE PLANTED PER THE PROJECT LANDSCAPE PLANS AND IRRIGATED UNTIL GROUND COVER IS ESTABLISHED.
8. THE STOCKPILING OF EXCESS MATERIAL IS SUBJECT TO THE APPROVAL OF THE CITY.
9. ALL TRENCH BACKFILLS ARE TO BE TESTED AND APPROVED BY THE GEOTECHNICAL ENGINEER.
10. ALL CUT SLOPES SHALL BE INVESTIGATED BY THE GEOTECHNICAL ENGINEER DURING GRADING TO DETERMINE IF ANY POTENTIAL STABILITY PROBLEMS EXIST. SHOULD EXCAVATION DISCLOSE ANY GEOTECHNICAL HAZARDS OR POTENTIAL GEOTECHNICAL HAZARDS THE GEOTECHNICAL ENGINEER SHALL RECOMMEND NECESSARY TREATMENT TO THE CONTRACTOR.
11. THE FINAL COMPACTION REPORT AND APPROVAL FROM THE GEOTECHNICAL ENGINEER SHALL CONTAIN DETAILS REGARDING THE TYPE OF FIELD TESTING PERFORMED INCLUDING THE METHOD OF OBTAINING THE IN-PLACE DENSITY, WHETHER SAND CONE, OR DRIVE RING SHALL BE NOTED FOR EACH TEST. SUFFICIENT MAXIMUM DENSITY DETERMINATIONS SHALL BE PERFORMED TO VERIFY THE ACCURACY OF THE MAXIMUM DENSITY CURVES USED BY THE FIELD TECHNICIAN.
12. SANITARY FACILITIES SHALL BE MAINTAINED ON SITE THROUGHOUT THE DURATION OF CONSTRUCTION.
13. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF AND PROTECT ALL EXISTING UTILITIES AND TO ENSURE THAT SERVICE IS NOT DISRUPTED TO EXISTING FACILITIES.
14. ALL EXISTING DRAINAGE COURSES ON THE PROJECT SITE MUST CONTINUE TO FUNCTION, ESPECIALLY DURING STORM CONDITIONS. APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT EXISTING STRUCTURES AND ADJACENT PROPERTIES DURING CONSTRUCTION. IF THE CONTRACTOR'S ACTIVITIES DAMAGE OR ADVERSELY AFFECT SAID ITEMS IN ANY WAY DUE TO OBSTRUCTING EXISTING DRAINAGE PATTERNS, THE CONTRACTOR IS RESPONSIBLE FOR WORKING OUT AN ACCEPTABLE SOLUTION TO THE SATISFACTION OF THE AFFECTED PROPERTY OWNER(S).
15. ALL PLANTERS ADJACENT TO THE FOUNDATIONS SHALL BE SEALED ALONG THE SIDE OF THE FOUNDATION FOOTING AND EXTENDED UNDER THE PLANTER A MINIMUM OF 12" TO PREVENT MOISTURE FROM REACHING THE FOUNDATION SUB-GRADE SOILS.
16. EXPORTED MATERIAL SHALL BE TAKEN TO A LEGAL DUMP SITE OR PERMITTED RECEIVING SITE APPROVED BY THE LOCAL AGENCY HAVING JURISDICTION.
17. PERMISSION IS REQUIRED FROM THE ADJACENT PROPERTY OWNER WHENEVER WORK IS PROPOSED OR NECESSARY ACROSS THE PROJECT'S PROPERTY LINES.
18. ANY DIRT, ROCK DEBRIS OR CONSTRUCTION MATERIAL THAT IS TRACKED OR DROPPED WITHIN THE PUBLIC RIGHT OF WAY DURING THE TRANSPORTATION OF THAT MATERIAL OR EQUIPMENT ASSOCIATED WITH THE PROJECT SHALL BE CLEANED OR REMOVED DAILY.
19. DIRT ACCESS RAMP OVER CURBS AND GUTTERS TO THE CONSTRUCTION SITE ARE PROHIBITED, WHEN NECESSARY FOR ENTRANCE TO SUCH CONSTRUCTION SITES, TEMPORARY ASPHALT RAMPS WITH A MINIMUM OF A 3" DIAMETER PIPE WILL CONSTRUCTED TO CONVEY CUTTER DRAINAGE.
20. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND OBTAINING REQUIRED PERMITS FROM THE DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (OSHA).
21. PROPOSED REVISIONS TO THE GRADING PLAN SHALL BE DRAWN IN RED PENCIL ON BOND COPIES OF THE APPROVED PLANS. THESE COPIES SHALL BE SUBMITTED TO THE OWNER AND ENGINEER FOR APPROVAL. AFTER APPROVAL IS GIVEN, THE OWNER MAY REQUIRE AS-BUILT THE PLANS.
22. RULE 403, AIR QUALITY CONTROL MUST BE IMPLEMENTED DURING CONSTRUCTION:
  - 22.1 PERSON SHALL NOT CAUSE OR ALLOW THE EMISSIONS OF FUGITIVE DUST FROM ANY TRANSPORT, HANDLING, CONSTRUCTION OR STORAGE ACTIVITY SO THAT THE PRESENCE OF SUCH DUST REMAINS VISIBLE IN THE ATMOSPHERE BEYOND THE PROPERTY LINE OF THE EMISSION SOURCE. (DOES NOT APPLY TO EMISSION EMANATING FROM UNPAVED ROADWAYS OPEN TO PUBLIC TRAVEL OR FARM ROADS. THIS EXCLUSION SHALL NOT APPLY TO INDUSTRIAL OR COMMERCIAL FACILITIES).
  - 22.2 A PERSON SHALL TAKE EVERY RESPONSIBLE PRECAUTION TO MINIMIZE FUGITIVE DUST EMISSIONS FROM WRECKING, EXCAVATION, GRADING CLEARING OF LAND AND SOLID WASTE DISPOSAL OPERATIONS.
  - 22.3 A PERSON SHALL NOT CAUSE OR ALLOW PARTICULATE MATTER TO EXCEED 100 MICROGRAMS PER CUBIC METER WHEN DETERMINED AS THE PROPERTY LINE FOR A MINIMUM OF FIVE HOURS.
  - 22.4 A PERSON SHALL TAKE EVERY REASONABLE PRECAUTION TO PREVENT VISIBLE PARTICULATE MATTER FROM BEING DEPOSITED UPON PUBLIC ROADWAYS, PRECAUTIONS SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE REMOVAL OF PARTICULATE MATTER FROM EQUIPMENT PRIOR TO THE MOVEMENT ON PAVED STREETS ONTO WHICH SUCH MATERIAL HAS BEEN DEPOSITED.
  - 22.5 SUBSECTIONS (22.1) AND (22.2) SHALL NOT BE APPLICABLE WHEN THE WIND SPEED INSTANTANEOUSLY EXCEEDS 40 KILOMETERS (25 MILES PER HOUR), OR WHEN THE AVERAGE WIND SPEED DETERMINATIONS SHALL BE ON A 15 MINUTE AVERAGE AT THE NEAREST OFFICIAL AIR-MONITORING STATION OR BY A WIND INSTRUMENT LOCATED AND MONITORED ON SITE.
23. CONSTRUCTION ACTIVITIES SHALL OCCUR ONLY BETWEEN THE HOURS OF 7:30 AM AND 4:30 PM, MONDAY THROUGH FRIDAY UNLESS OTHERWISE AUTHORIZED BY THE CITY.
24. CONTRACTOR SHALL USE LOW EMISSION MOBILE CONSTRUCTION EQUIPMENT DURING ALL SITE PREPARATION, GRADING AND CONSTRUCTION ACTIVITIES, WHERE FEASIBLE.
25. CONTRACTOR SHALL MAINTAIN ALL CONSTRUCTIONS ENGINES TUNED CONSISTENT WITH MANUFACTURE'S SPECIFICATIONS DURING ALL SITE PREPARATION, GRADING AND CONSTRUCTION ACTIVITIES.
  - 25.1 CONTRACTOR SHALL USE LOW SULFUR FUEL FOR STATIONARY CONSTRUCTION EQUIPMENT AS REQUIRED BY AQMD RULE 431.1 AND 431.2 AND SHALL USE EXISTING POWER SOURCES AND CLEAN FUEL GENERATORS WHEN POSSIBLE AS FEASIBLE DURING ALL SITE PREPARATION, GRADING AND CONSTRUCTION ACTIVITIES.
26. CONSTRUCTION PARKING SHALL BE ON-SITE, TRAFFIC CONTROL AND ACCESS SHALL BE IN ACCORDANCE WITH THE AGENCY HAVING JURISDICTION OVER THE PROJECT.
27. THE SPEED OF CONSTRUCTION VEHICLES ON-SITE SHALL BE LIMITED TO 15 MILES PER HOUR.

28. TRUCKS AND LARGE CONSTRUCTION VEHICLES SHALL OBTAIN APPROVED HAUL ROUTES FROM CITY PUBLIC WORKS.
29. CONTRACTOR SHALL CONTROL DUST IN AREAS USED FOR OFF-PAVEMENT PARKING, MATERIAL LAYDOWN AREAS OR THOSE AREAS AWAITING FUTURE CONSTRUCTION. FREQUENTLY ACCESSED AREAS SHALL BE PAVED OR BASED AS EARLY AS POSSIBLE TO MINIMIZE DIRT TRACKOUT THE PUBLIC RIGHT OF WAY.
30. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING MEASURE:
  - 30.1. CESSATION OF ACTIVITIES DURING A STAGE-2 SMOG EPISODE, CALL 800-242-4022 FOR THE DAILY SMOG FORECAST.
  - 30.2. TRUCK ROUTES AND SCHEDULES FOR THE RECEIPT OF MATERIALS SHALL BE COORDINATED WITH THE APPROPRIATE AGENCIES.
  - 30.3. WHERE FEASIBLE, ON-ROAD AND OFF-ROAD VEHICLES AND EQUIPMENT SHALL BE TURNED OFF AND SUBSEQUENTLY RESTARTED IF THE ANTICIPATED DURATION OF IDLING IS EXPECTED TO EXCEED FIVE MINUTES.
31. THE CONTRACTOR SHALL IMPLEMENT THE FOLLOWING HIGH WIND DUST CONTROL MEASURE WHEN INSTANTANEOUS WIND SPEEDS EXCEED 25 MILES PER HOUR.
  - 32.1 TERMINATION / MODIFICATION OF SCRAPERS, GRADERS OR DOZERS ON UNPAVED SURFACES UNTIL WINDS SUBSIDE.
  - 32.2 APPLICATION OF WATER AS NEEDED TO ANY PREVIOUSLY GRADED SURFACE IF DUST EMANATION IS VISIBLE FROM SUCH A SURFACE.
32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EQUIPMENT TO PREVENT VISIBLE SOOT FROM REDUCING LIGHT TRANSMISSION THROUGH THE EXHAUST STACK BY MORE THAN 20 PERCENT FOR MORE THAN THREE MINUTES PER HOUR AND USE LOW SULFUR FUEL AS REQUIRED BY THE APPROPRIATE AGENCY.
33. TRUCKS USED IN HAULING DIRT TO OR FROM THE SITE ON PUBLIC ROADS WILL BE COVERED OR WILL MAINTAIN A SIX INCH DIFFERENTIAL BETWEEN THE MAXIMUM HEIGHT OF ANY MATERIAL HAULED AND THE TOP OF THE TRAILER, HAUL TRUCK DRIVERS WILL LOAD PRIOR TO LEAVING THE SITE TO PREVENT SOIL LOSS DURING TRANSPORTATION.
34. PURSUANT TO SECTION 8771 OF THE BUSINESS AND PROFESSIONS CODE, EXISTING SURVEY MONUMENTS SHALL BE NOTED AND DOCUMENT BEFORE CONSTRUCTION. IF ANY MONUMENTS ARE DISTURBED DURING CONSTRUCTION THE CONTRACTORS SHALL PAY LICENSED LAND SURVEYOR OR REGISTERED ENGINEER TO RESET SUCH MONUMENTS.
35. PAD CERTIFICATION IS REQUIRED. A SOILS OR CIVIL ENGINEER SHALL DETERMINE THAT THE GRADING PERFORMED IS IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED PLANS AND SUITABLE TO SUPPORT THE INTENDED STRUCTURE.
36. ALL LANDSCAPE IRRIGATION BACKFLOW DEVICES MUST MEET CURRENT CITY REQUIREMENTS FOR PROPER INSTALLATION.
37. NO DISCHARGE OF CONSTRUCTION WASTEWATER, BUILDING MATERIALS, DEBRIS, OR SEDIMENT FROM THE SITE IS PERMITTED. IN ADDITION, CONTROL MEASURES MUST ALSO BE TAKEN TO PREVENT STREET SURFACE WATER FROM ENTERING THE CONSTRUCTION SITE.



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**SUPPLEMENTAL NOTES:**

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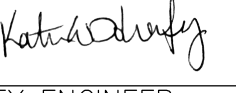



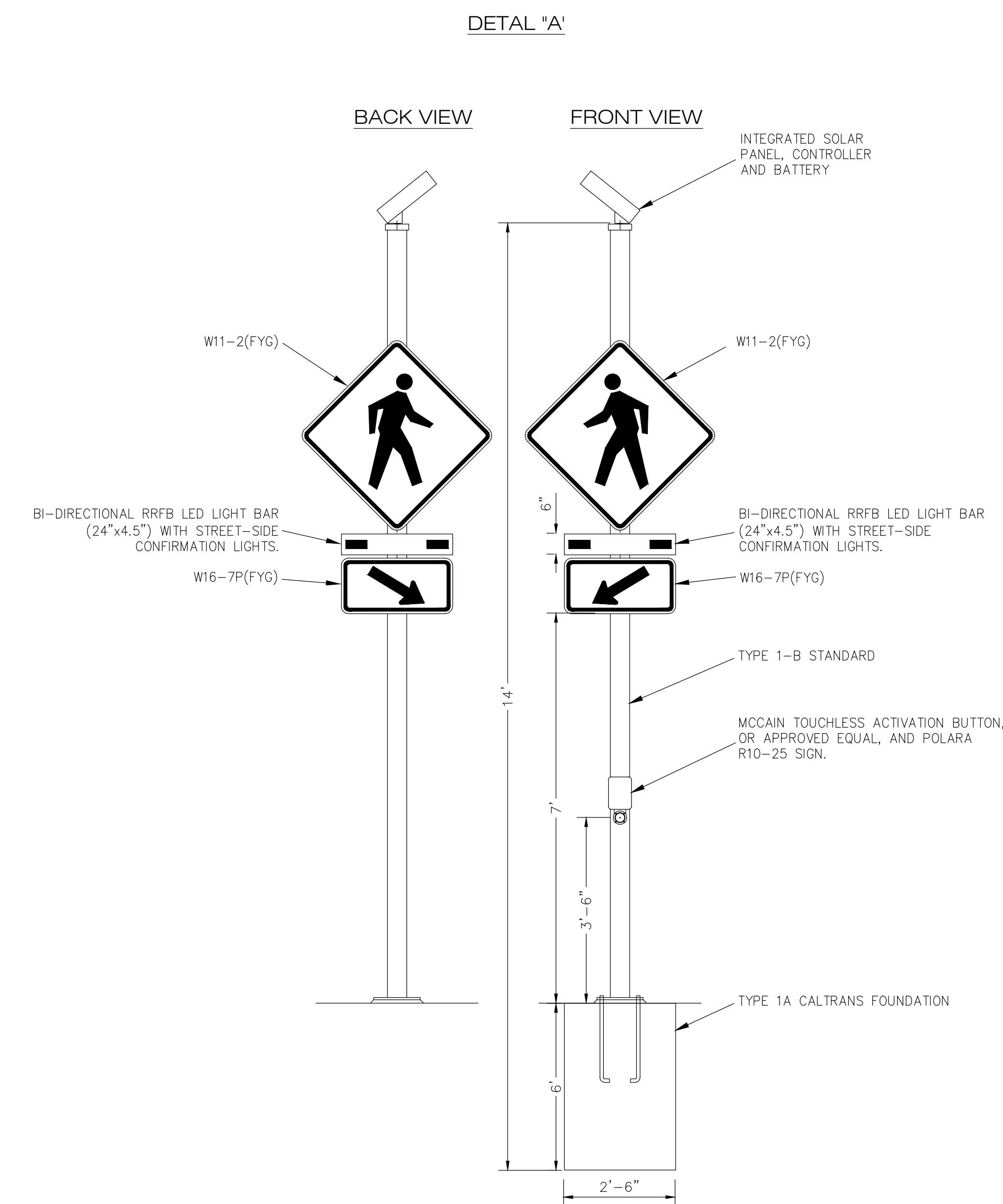
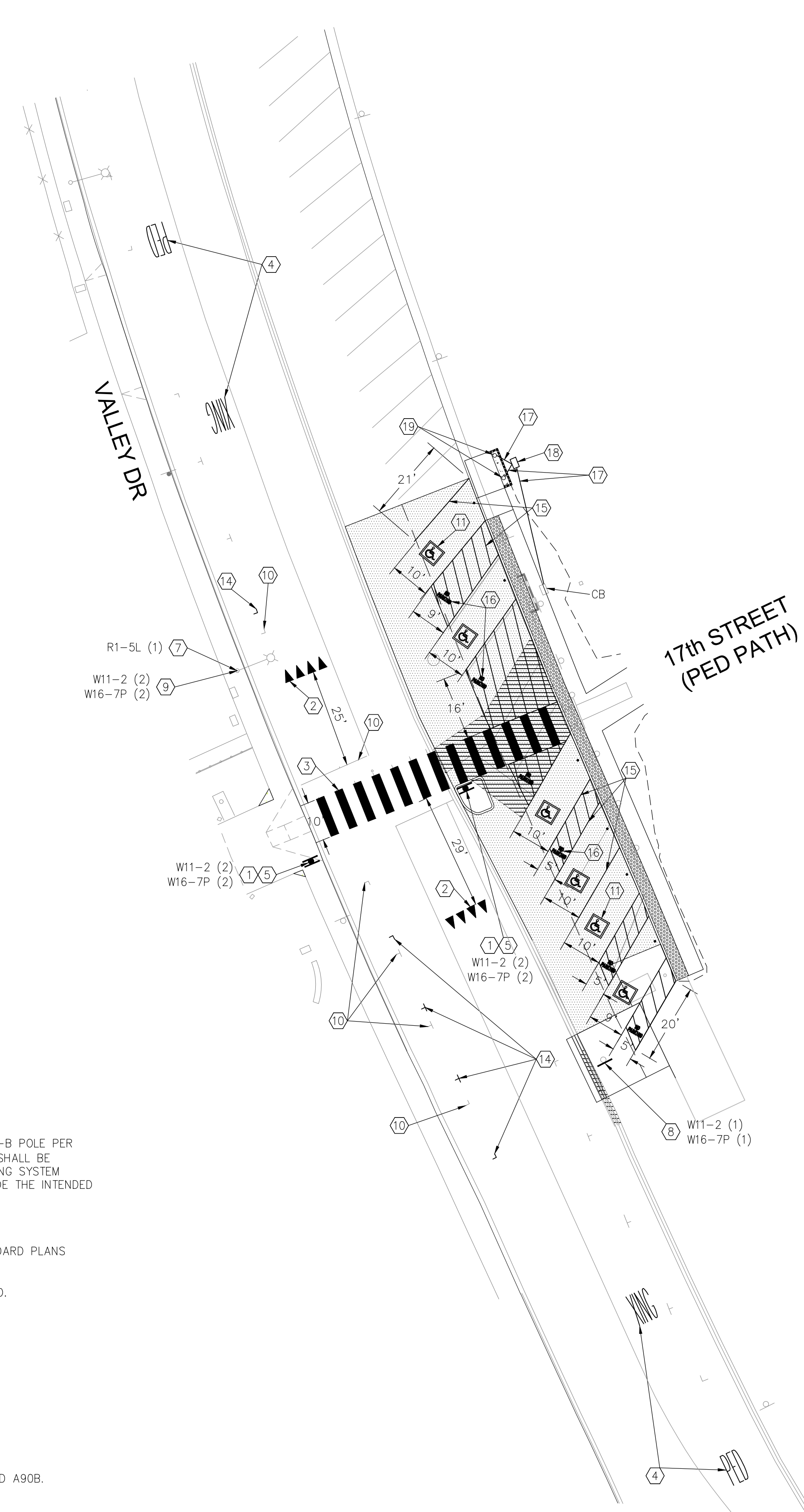
PLANS PREPARED BY:



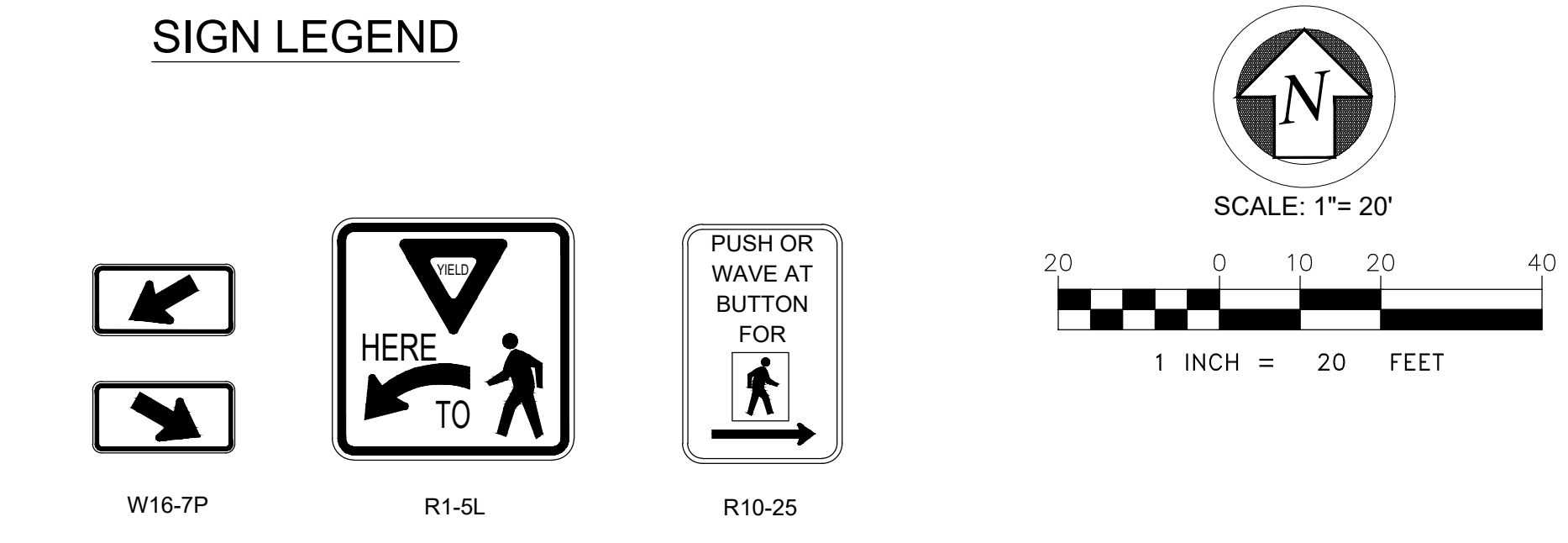
1700 Carnegie Avenue, Suite 100  
Santa Ana, CA 92705-4551  
Phone: (949) 270-9480  
Fax: (949) 270-9481

REVIEWED	BY	DATE

<b>CITY OF MANHATTAN BEACH</b> PUBLIC WORKS DEPARTMENT – ENGINEERING DIVISION																										
<b>CROSSWALK IMPROVEMENT PROJECT</b>																										
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SCALE NTS		DATE 05-12-23																								
SHEET 4 OF 14		DRAWING NO. T-264																								



**SIGN LEGEND**



**CONSTRUCTION NOTES:**

- 1 FURNISH AND INSTALL RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM ON NEW 1-B POLE PER DETAIL "A" SHOWN ON THIS SHEET. RRFB SYSTEM AND FINAL LOCATION OF INSTALLATION SHALL BE APPROVED BY CITY ENGINEER. ALL EQUIPMENT REQUIRE CITY APPROVAL PRIOR TO ORDERING SYSTEM COMPONENTS. CONTRACTOR SHALL FURNISH AND INSTALL ALL APPURTENANCES TO PROVIDE THE INTENDED OPERATIONS.
- 2 APPLY WHITE THERMOPLASTIC YIELD LINE PER CALTRANS STD. PLAN A24E.
- 3 APPLY WHITE, SLIP RESISTANT, THERMOPLASTIC CONTINENTAL CROSSWALK PER CITY STANDARD PLANS MBSI-174A-0(ST-27).
- 4 APPLY WHITE THERMOPLASTIC PAVEMENT MARKING WORDS PER CALTRANS STD. PLAN A24D.
- 5 FURNISH AND INSTALL NEW SIGNS ON BOTH SIDES OF NEW RRFB POST.
- 6 FURNISH AND INSTALL NEW SIGN AND POST.
- 7 FURNISH AND INSTALL NEW SIGN ON EXISTING LIGHT POLE.
- 8 REMOVE EXISTING SIGN PANEL FROM EXISTING SIGN POST.
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- 11 APPLY DIAGONAL VAN ACCESSIBLE PARKING STALLS PER CALTRANS STD. PLANS A90A AND A90B.
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- 18 FURNISH AND INSTALL #5 PULL BOX.
- 19 RELOCATE EXISTING EV CHARGERS ON NEW FOUNDATION. CITY ELECTRICIAN TO COMPLETE CONNECTION. CONTRACTOR TO PROVIDE SUPPORT FOR TURN-ON.

**SUPPLEMENTAL NOTES:**

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PLANS PREPARED BY:

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Phone: (949) 270-9490  
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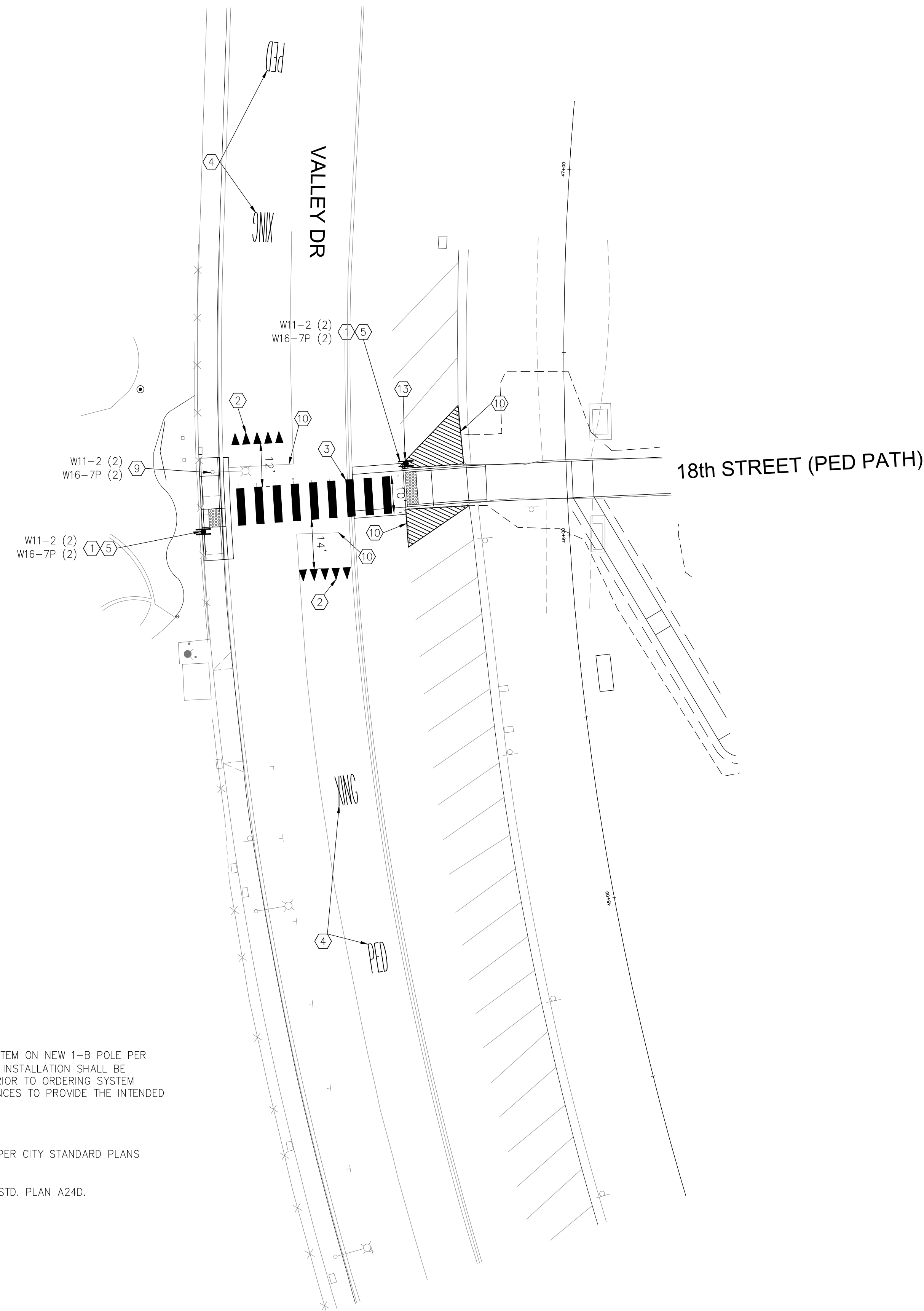
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**CITY OF MANHATTAN BEACH**  
PUBLIC WORKS DEPARTMENT - ENGINEERING DIVISION

**CROSSWALK IMPROVEMENT PROJECT**

**VALLEY DRIVE AT 17TH STREET RRFB PLAN**

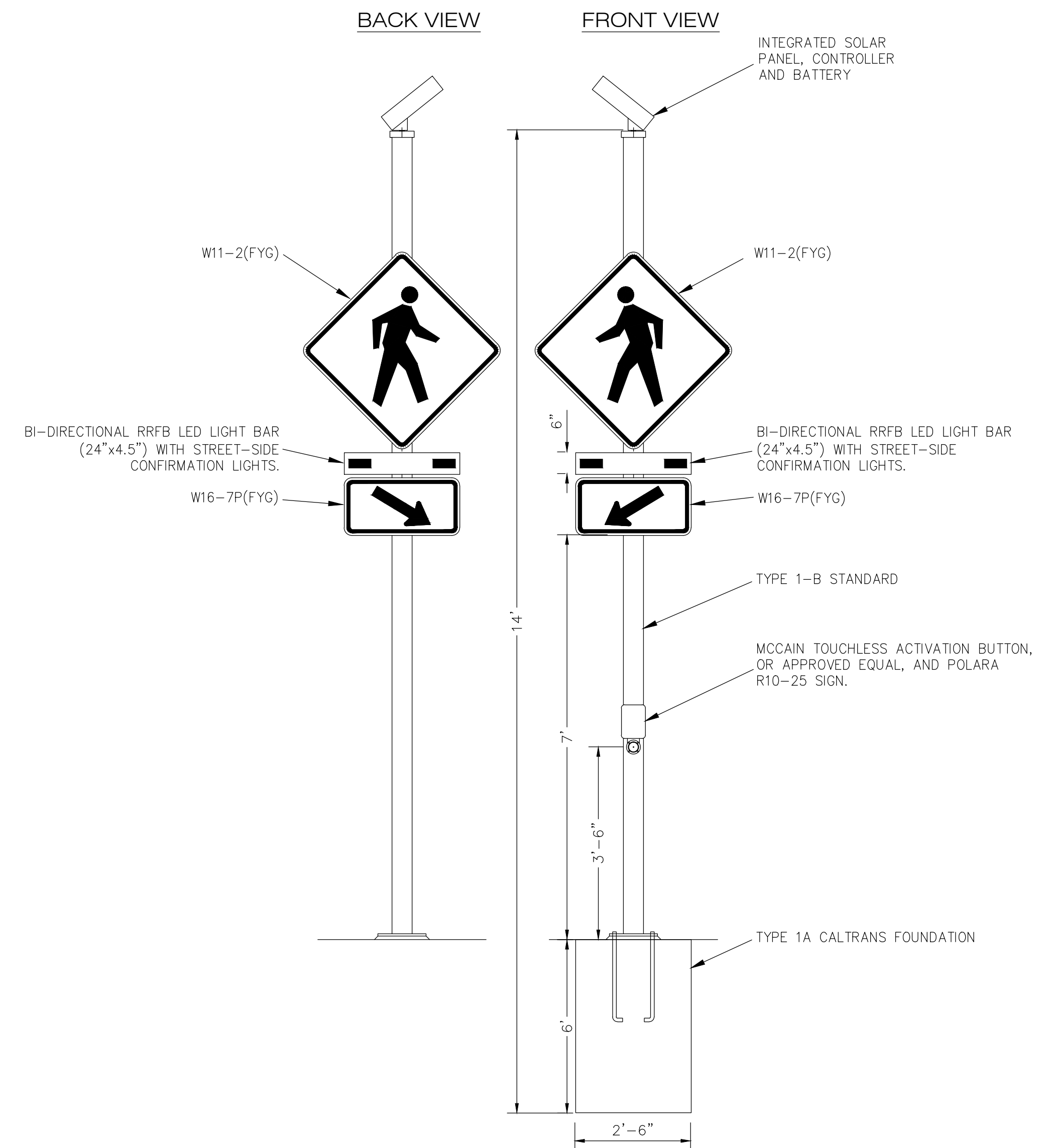
DESIGNED BY <i>Paul Frislie</i> PAUL FRISLIE 05-18-23 DATE	REVIEWED BY <i>Helen Shi</i> HELEN SHI 05-12-23 DATE	RECOMMENDED BY <i>Katherine Doherty</i> KATHERINE DOHERTY 05-12-23 DATE	DRAWING NO. <b>T-264</b>
SCALE 1"=20'		SHEET 5 OF 14	



**CONSTRUCTION NOTES:**

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DETAIL "A"



**SIGN LEGEND**

W11-2

W16-7P

R1-5L

R10-25

NO WORK SHALL BE DONE ON THIS SITE UNTIL USA AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE, TWO WORKING DAYS BEFORE YOU DIG.

**SUPPLEMENTAL NOTES:**

1. THE CONTRACTOR SHALL LOCATE, VERIFY AND PROTECT ALL EXISTING UNDERGROUND UTILITIES. DAMAGED UTILITIES SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
2. DUE TO INDIVIDUAL LOT IMPROVEMENTS, THE EXISTING WATER, SEWER AND/OR GAS LATERALS MAY NOT BE AT THE LOCATIONS SHOWN OR SHOWN IN THEIR ENTIRETY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING.
3. THE CONTRACTOR SHALL DETERMINE THE DEPTH OF THE GAS, SCE, CABLE, SEWER, STORM DRAIN AND WATER AT ALL INTERSECTIONS AND INTERFERENCES PRIOR TO CONSTRUCTION AND AS NOTED ON PLANS.

PLANS PREPARED BY:

1700 Camino Avenue, Suite 100  
Brea, CA 92705-5551  
Phone: (949) 770-9486  
Fax: (949) 270-9481

REVIEWED BY	DATE

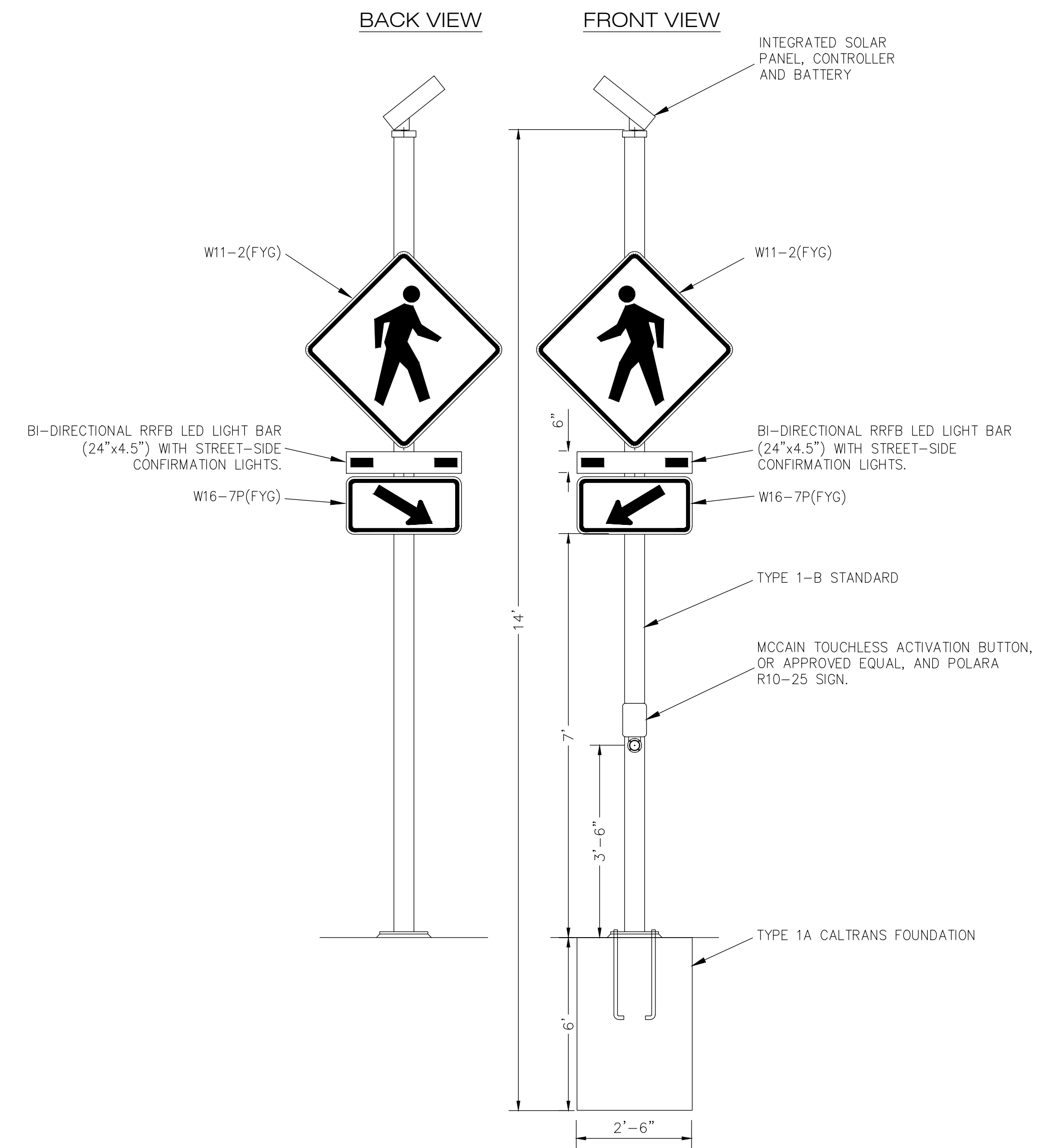
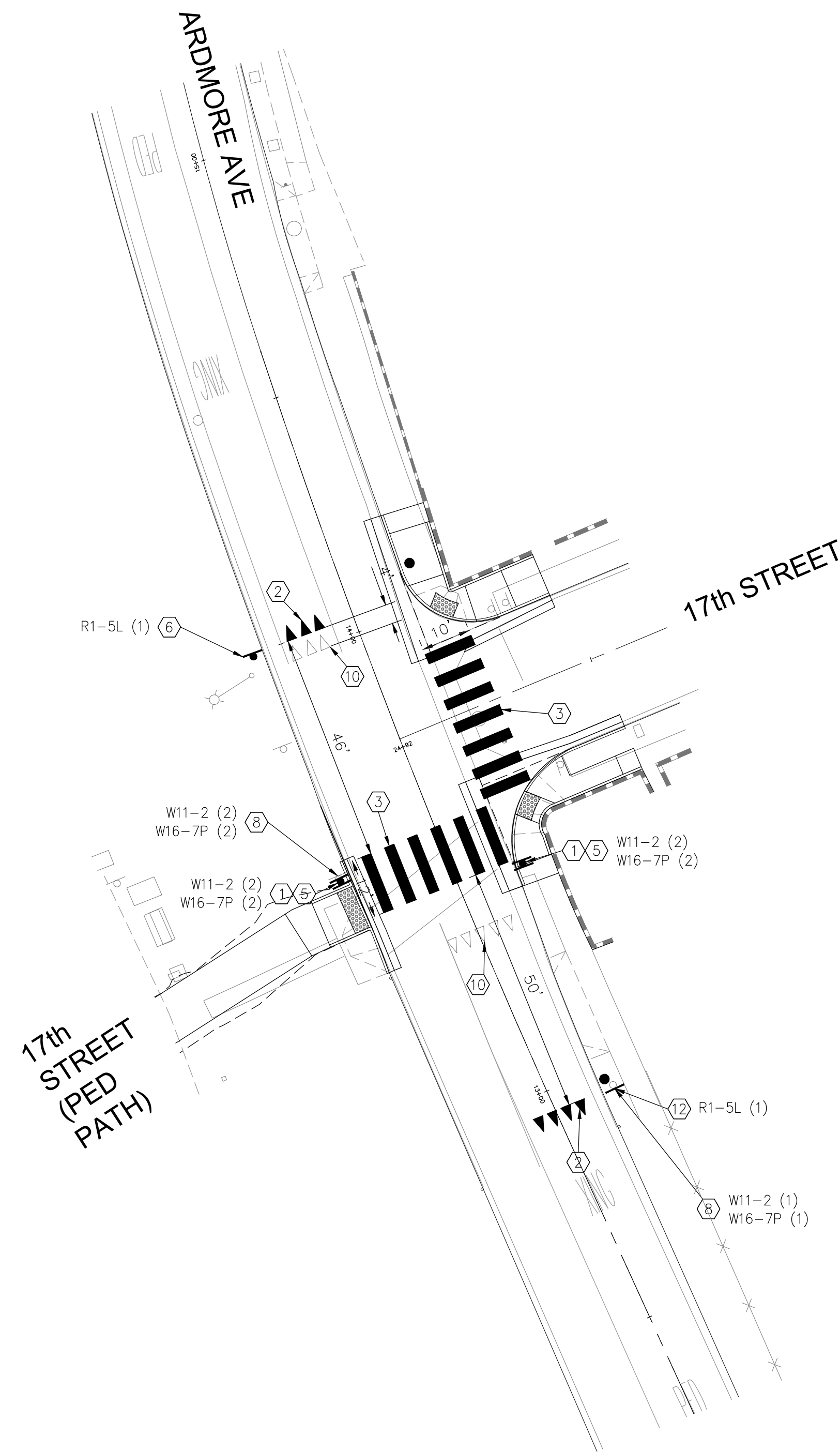
**CITY OF MANHATTAN BEACH**  
PUBLIC WORKS DEPARTMENT - ENGINEERING DIVISION

**CROSSWALK IMPROVEMENT PROJECT**

**VALLEY DRIVE AT 18TH STREET RRFB PLAN**

DESIGNED BY <i>Paul Frislie</i> PAUL FRISLIE DATE: 05-18-23	REVIEWED BY <i>Helen Shi</i> HELEN SHI DATE: 6/22/2023	RECOMMENDED BY <i>Katherine Doherty</i> KATHERINE DOHERTY DATE: 6/22/2023
SCALE: 1"=20"	DATE: 05-12-23	DRAWING NO. T-264
SHEET 6 OF 14		

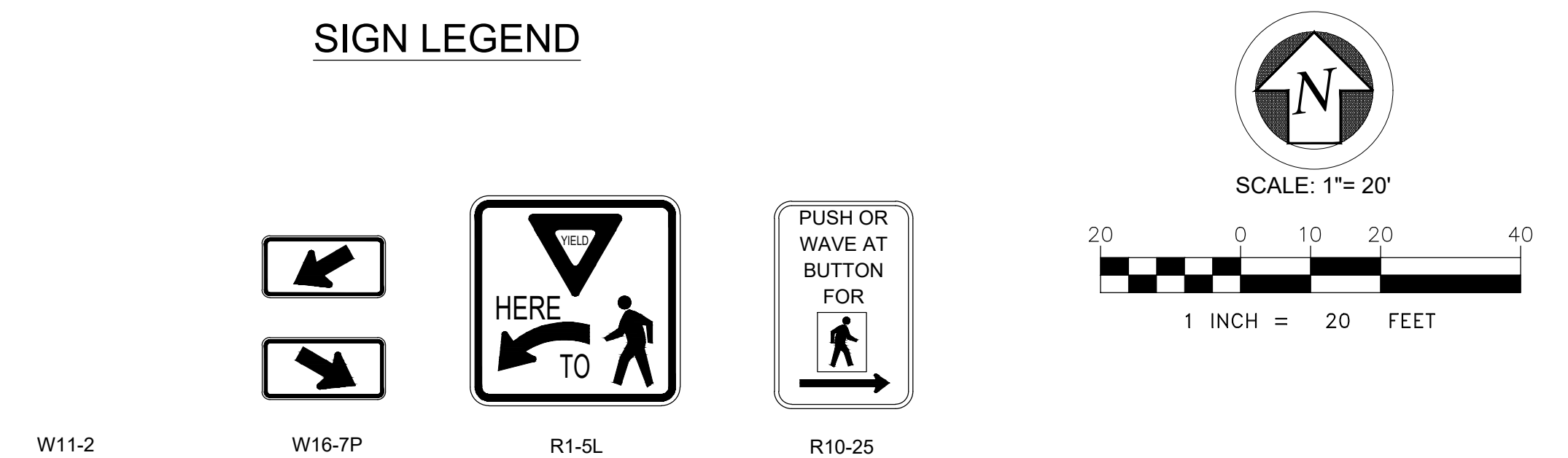
DETAIL 'A'



**CONSTRUCTION NOTES:**

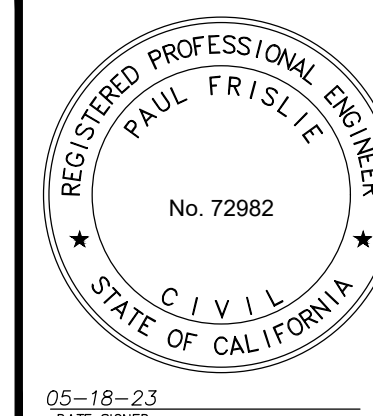
- 1 FURNISH AND INSTALL RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM ON NEW 1-B POLE PER DETAIL 'A' SHOWN ON THIS SHEET. RRFB SYSTEM AND FINAL LOCATION OF INSTALLATION SHALL BE APPROVED BY CITY ENGINEER. ALL EQUIPMENT REQUIRE CITY APPROVAL PRIOR TO ORDERING SYSTEM COMPONENTS. CONTRACTOR SHALL FURNISH AND INSTALL ALL APPURTENANCES TO PROVIDE THE INTENDED OPERATIONS.
- 2 APPLY WHITE THERMOPLASTIC YIELD LINE PER CALTRANS STD. PLAN A24E.
- 3 APPLY WHITE, SLIP RESISTANT, THERMOPLASTIC CONTINENTAL CROSSWALK PER CITY STANDARD PLANS MBSI-174A-0(ST-27).
- 4 APPLY WHITE THERMOPLASTIC PAVEMENT MARKING WORDS PER CALTRANS STD. PLAN A24D.
- 5 FURNISH AND INSTALL NEW SIGNS ON BOTH SIDES OF NEW RRFB POST.
- 6 FURNISH AND INSTALL NEW SIGN AND POST.
- 7 FURNISH AND INSTALL NEW SIGN ON EXISTING LIGHT POLE.
- 8 REMOVE EXISTING SIGN PANEL FROM EXISTING SIGN POST.
- 9 REMOVE EXISTING SIGN PANEL FROM EXISTING LIGHT POLE.
- 10 REMOVE ALL CONFLICTING STRIPING. EXISTING THERMOPLASTIC SHALL BE MICROGRINDED.
- 11 APPLY DIAGONAL VAN ACCESSIBLE PARKING STALLS PER CALTRANS STD. PLANS A90A AND A90B.
- 12 FURNISH AND INSTALL NEW SIGN ON EXISTING SIGN POST.
- 13 REMOVE EXISTING SIGNS AND POST.
- 14 APPLY WHITE THERMOPLASTIC PARKING STALL T'S.
- 15 APPLY WHITE THERMOPLASTIC PARKING LINES.
- 16 APPLY WHITE THERMOPLASTIC PAVEMENT MARKING WORDS PER CALTRANS STD. PLAN A24E.
- 17 INSTALL 2" CONDUIT. CITY ELECTRICIAN TO PULL AND CONNECT CONDUCTORS.
- 18 FURNISH AND INSTALL #5 PULL BOX.
- 19 RELOCATE EXISTING EV CHARGERS ON NEW FOUNDATION. CITY ELECTRICIAN TO COMPLETE CONNECTION. CONTRACTOR TO PROVIDE SUPPORT FOR TURN-ON.

**SIGN LEGEND**



**SUPPLEMENTAL NOTES:**

1. THE CONTRACTOR SHALL LOCATE, VERIFY AND PROTECT ALL EXISTING UNDERGROUND UTILITIES. DAMAGED UTILITIES SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
2. DUE TO INDIVIDUAL LOT IMPROVEMENTS, THE EXISTING WATER, SEWER AND/OR GAS LATERALS MAY NOT BE AT THE LOCATIONS SHOWN OR SHOWN IN THEIR ENTIRETY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING.
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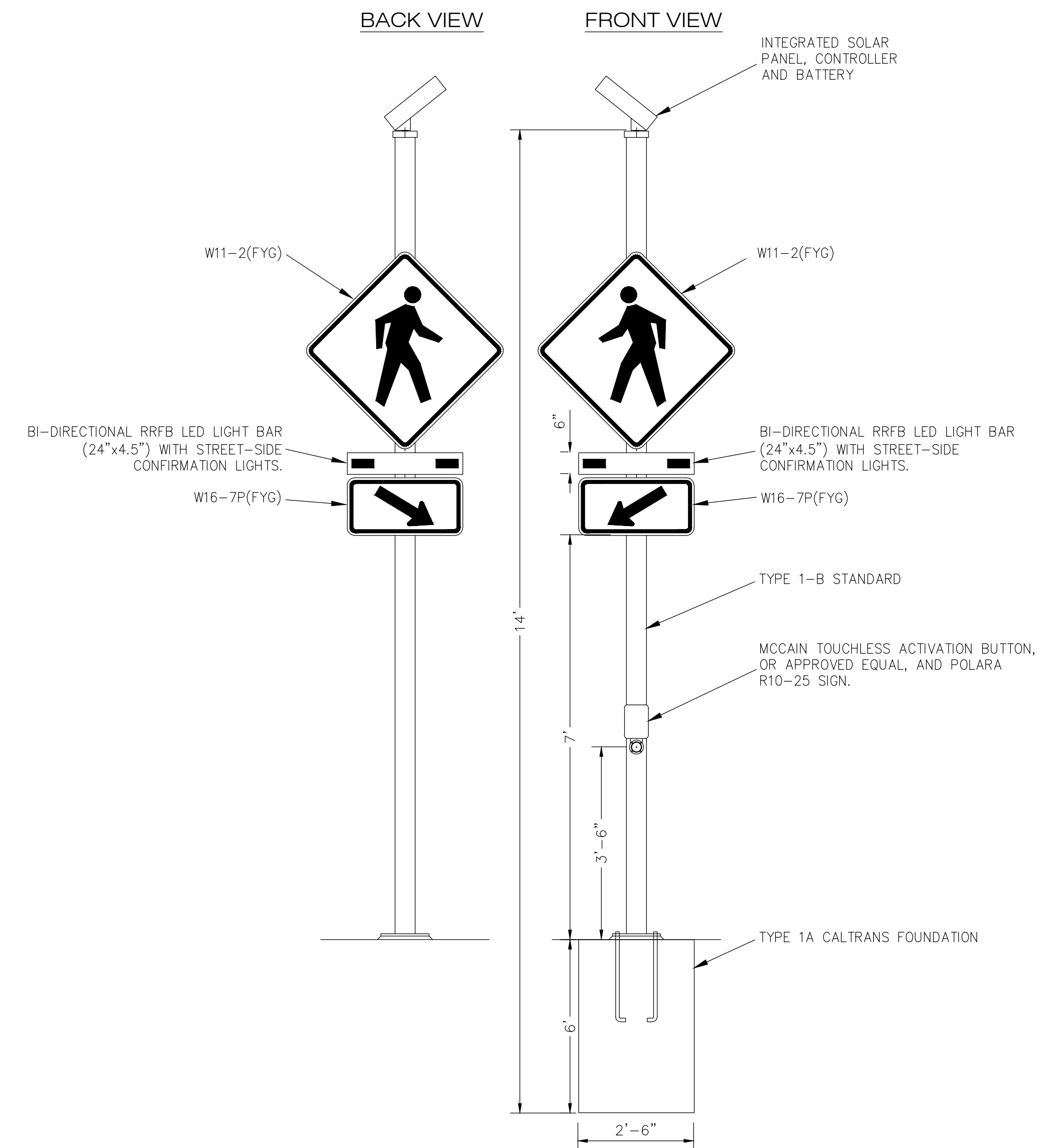
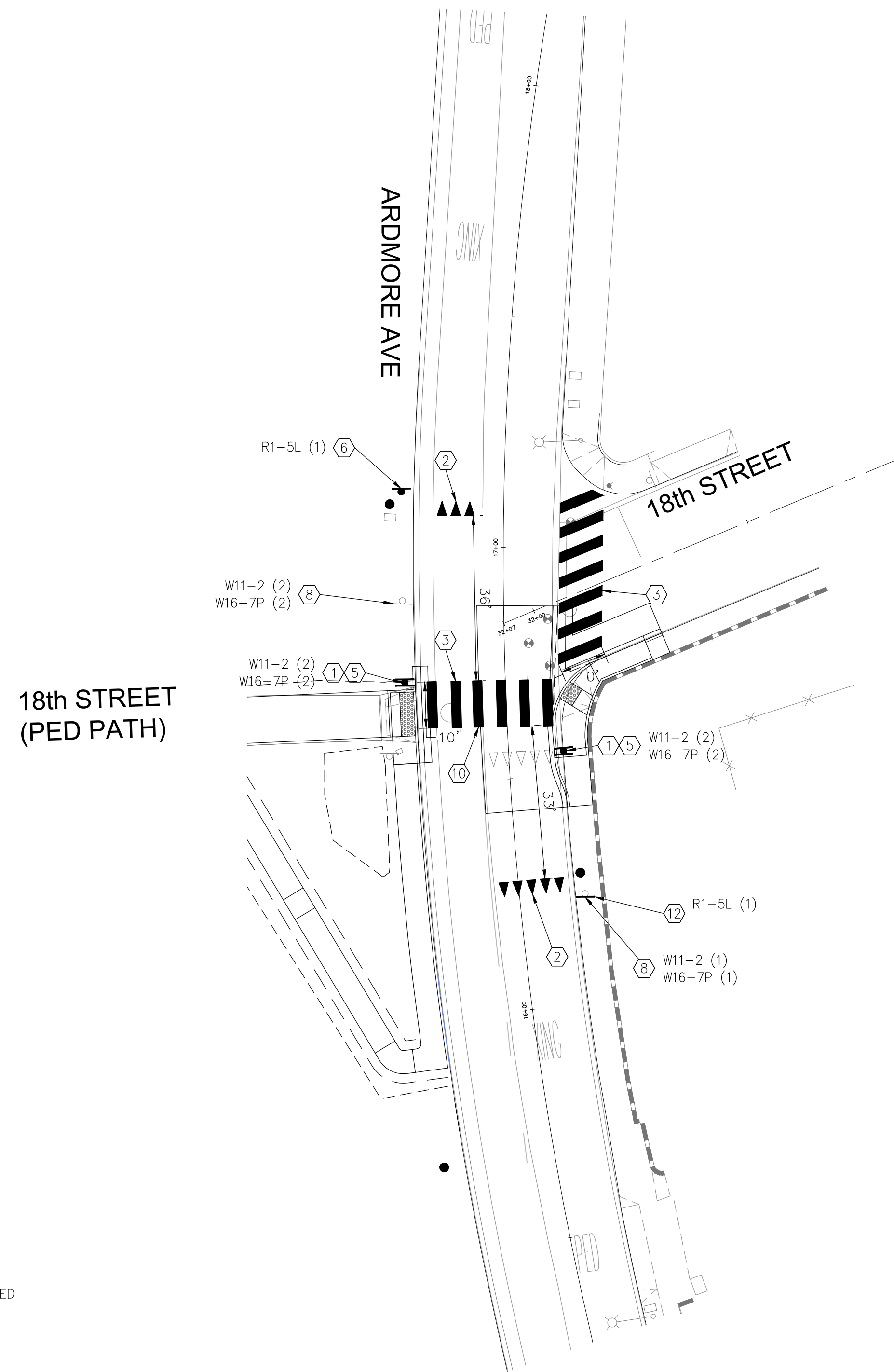
PLANS PREPARED BY:  
**iteris**  
1700 Camino Avenue, Suite 100  
Brea, CA 92705-5551  
Phone: (949) 770-9480  
Fax: (949) 270-9481

REVIEWED BY	DATE

<b>CITY OF MANHATTAN BEACH</b> PUBLIC WORKS DEPARTMENT - ENGINEERING DIVISION			
<b>CROSSWALK IMPROVEMENT PROJECT</b>			
<b>ARDMORE AVENUE AT 17TH STREET RRFB PLAN</b>			
DESIGNED BY <i>Paul Frislie</i> 05-18-23 DATE		RECOMMENDED BY <i>Katherine Doherty</i> 6/22/2023 DATE	
SCALE 1"=20'		DRAWING NO. T-264	
SHEET 7 OF 14			

NO WORK SHALL BE DONE ON THIS SITE UNTIL USA AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE, TWO WORKING DAYS BEFORE YOU DIG.

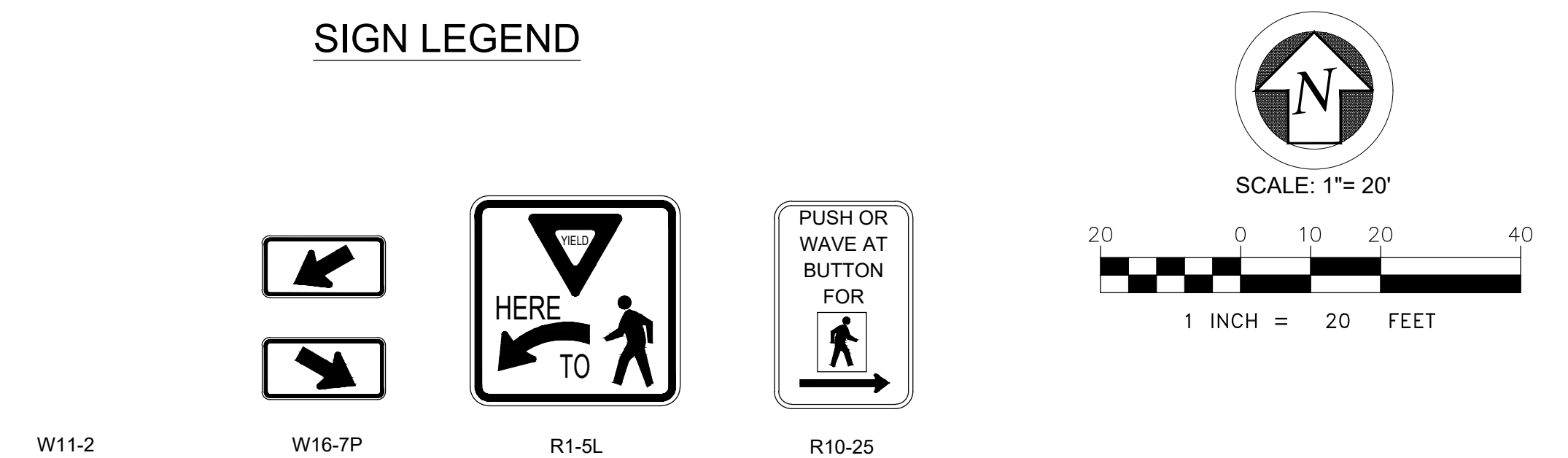
DETAIL 'A'



**CONSTRUCTION NOTES:**

- 1 FURNISH AND INSTALL RECTANGULAR RAPID FLASHING BEACON (RRFB) SYSTEM ON NEW 1-B POLE PER DETAIL 'A' SHOWN ON THIS SHEET. RRFB SYSTEM AND FINAL LOCATION OF INSTALLATION SHALL BE APPROVED BY CITY ENGINEER. ALL EQUIPMENT REQUIRE CITY APPROVAL PRIOR TO ORDERING SYSTEM COMPONENTS. CONTRACTOR SHALL FURNISH AND INSTALL ALL APPURTENANCES TO PROVIDE THE INTENDED OPERATIONS.
- 2 APPLY WHITE THERMOPLASTIC YIELD LINE PER CALTRANS STD. PLAN A24E.
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- 19 RELOCATE EXISTING EV CHARGERS ON NEW FOUNDATION. CITY ELECTRICIAN TO COMPLETE CONNECTION. CONTRACTOR TO PROVIDE SUPPORT FOR TURN-ON.

**SIGN LEGEND**



**SUPPLEMENTAL NOTES:**

1. THE CONTRACTOR SHALL LOCATE, VERIFY AND PROTECT ALL EXISTING UNDERGROUND UTILITIES. DAMAGED UTILITIES SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
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PLANS PREPARED BY:

1700 Camino Avenue, Suite 100  
Brea, CA 92705-5551  
Phone: (949) 270-9490  
Fax: (949) 270-9491

REVIEWED BY	DATE

REVISIONS			
NO.	DESCRIPTION	BY	DATE
REFERENCES			

**CITY OF MANHATTAN BEACH**  
PUBLIC WORKS DEPARTMENT - ENGINEERING DIVISION

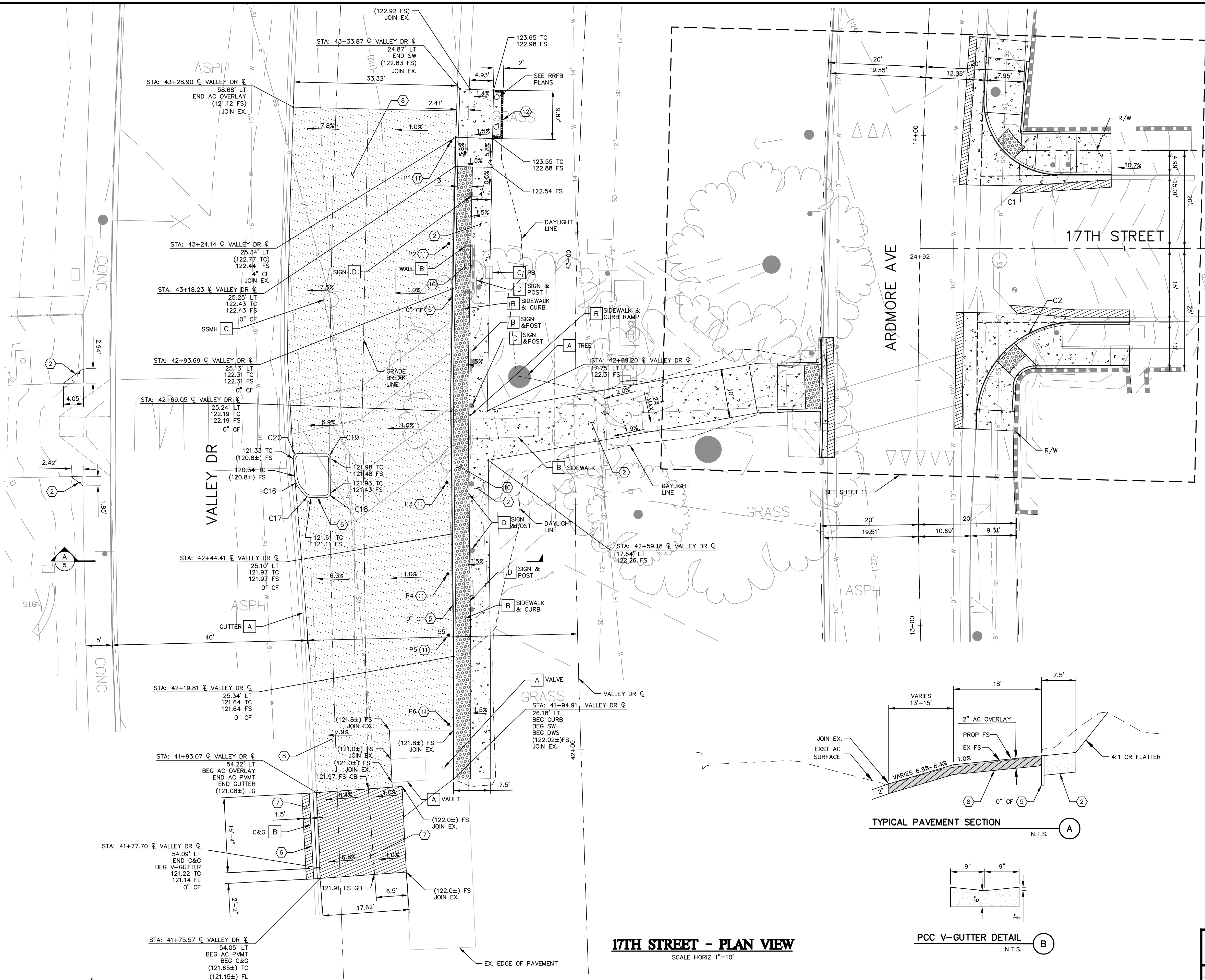
**CROSSWALK IMPROVEMENT PROJECT**

**ARDMORE AVENUE AT 18TH STREET RRFB PLAN**

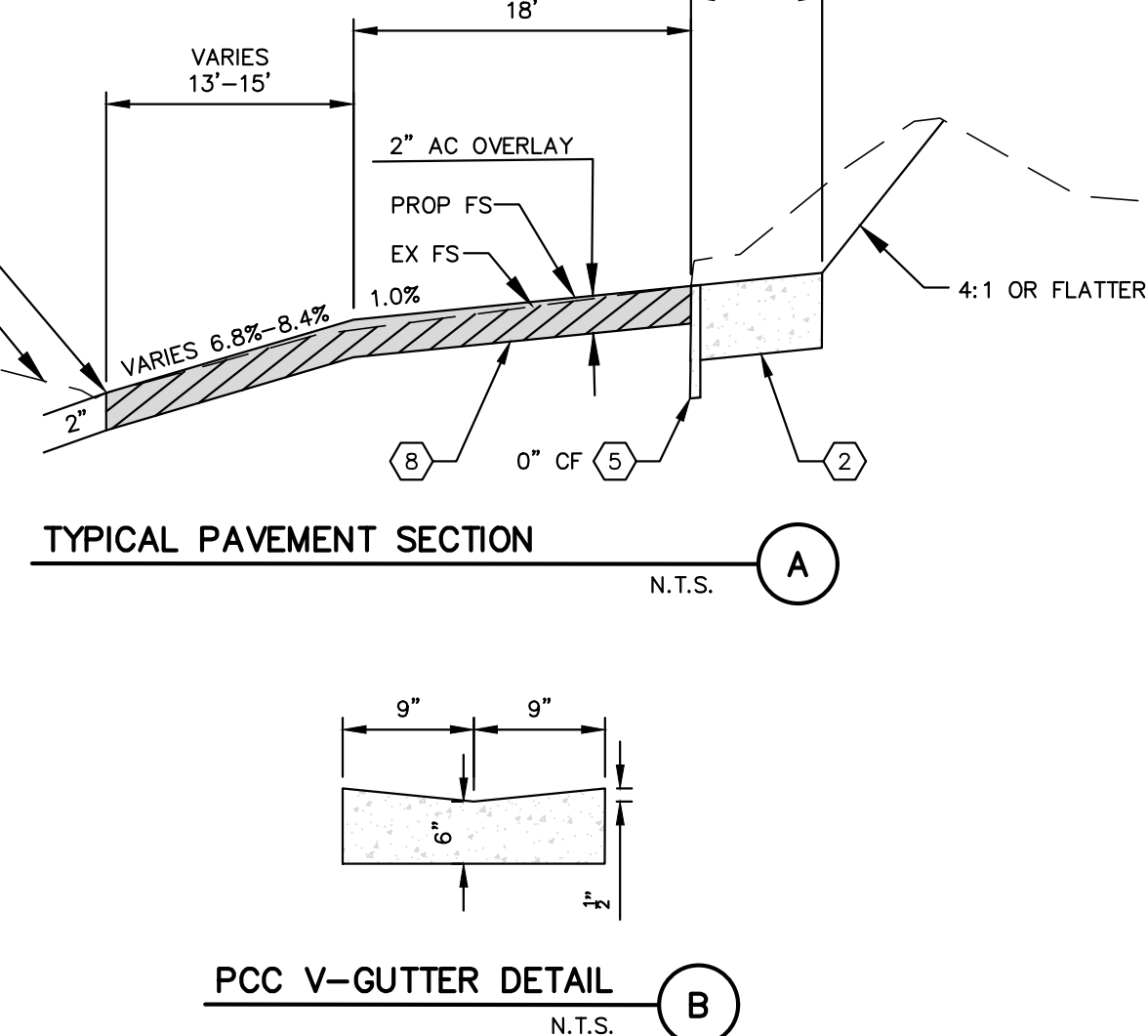
DESIGNED BY <i>Paul Frislie</i> PAUL FRISLIE 05-18-23 DATE	REVIEWED BY <i>Helen Shi</i> HELEN SHI 6/22/2023 DATE	RECOMMENDED BY <i>Katherine Doherty</i> KATHERINE DOHERTY 6/22/2023 DATE
SCALE 1"=20'	DATE 05-12-23	DRAWING NO. T-264
SHEET 8 OF 14		



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 PLOTTED BY: MarccC DATE: May 18, 2023 TIME: 09:57 AM



**17TH STREET - PLAN VIEW**  
SCALE HORIZ 1"=10'



**TYPICAL PAVEMENT SECTION** N.T.S. (A)

**PCC V-GUTTER DETAIL** N.T.S. (B)

**CONSTRUCTION NOTES**

- 2 CONSTRUCT 4" PCC SIDEWALK AND SIDEWALK JOINTS PER CITY OF MANHATTAN BEACH STD PLAN MBSI - 112A-0 (ST-2).
- 3 CONSTRUCT STANDARD 6" CURB AND 12" GUTTER PER CITY OF MANHATTAN BEACH STD PLAN MBSI - 120A-0 (ST-3).
- 5 CONSTRUCT A1-6 CURB PER SPPWC STD PLAN 120-3.
- 6 CONSTRUCT 1.5" WIDE PCC V-GUTTER PER DETAIL B, SHEET P-100.
- 7 CONSTRUCT 4" AC PAVEMENT OVER 5" AGGREGATE BASE.
- 8 COLD MILL AC (VARIABLE DEPTH) AND CONSTRUCT 2" THICK AC OVERLAY.
- 10 INSTALL DETECTABLE WARNING SURFACE.
- 11 INSTALL 6" DIA. BOLLARD PER DETAIL C, SHEET P-100.
- 12 CONSTRUCT A1-8 CURB PER SPPWC STD. PLAN 120-3.

**ABBREVIATIONS**

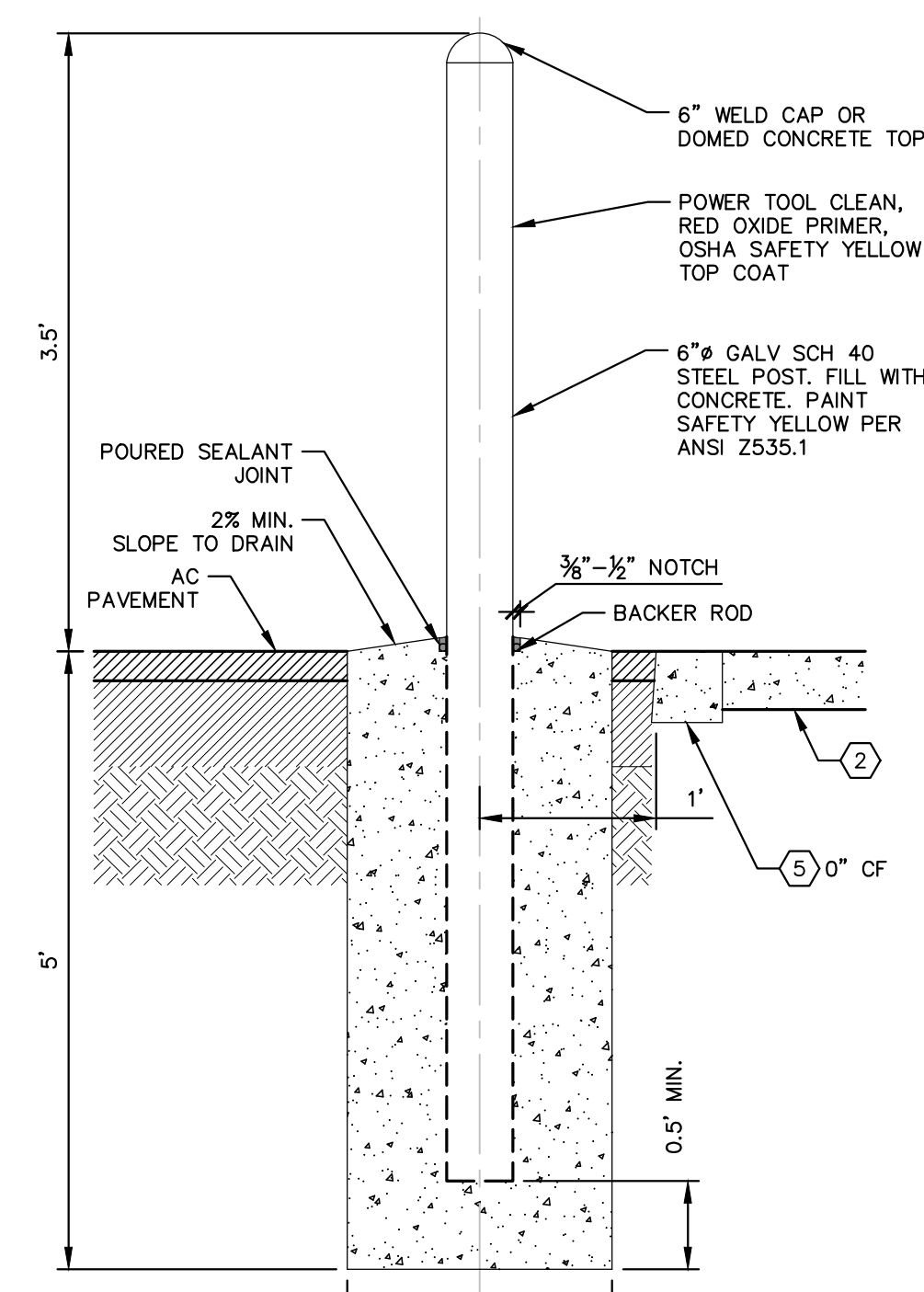
- BC BEGIN CURVE
- BCR BEGIN CURB RETURN
- BW BACK OF WALK
- CF CURB FACE
- C&G CURB AND GUTTER
- CL CENTERLINE
- EC END CURVE
- ECR END CURB RETURN
- EX EXISTING
- FL FLOW LINE
- FS FINISHED SURFACE
- LT LEFT
- PRG POINT OF REVERSE CURVATURE
- RT RIGHT
- R/W RIGHT-OF-WAY
- SW SIDEWALK
- TC TOP OF CURB
- TYP. TYPICAL

**LEGEND**

- PCC
- COLD MILL & AC OVERLAY
- AC PAVEMENT OVER BASE

**DISPOSITION NOTES**

- A PROTECT IN PLACE
- B REMOVE
- C ADJUST TO GRADE
- D RELOCATE



**BOLLARD DETAIL** N.T.S. (C)

POINT TABLE		
POINT #	NORTHING	EASTING
P1	9983.3937	4903.2276
P2	9963.9627	4910.8704
P3	9918.8493	4929.2454
P4	9901.6671	4936.6224
P5	9890.2021	4941.5345
P6	9873.4259	4948.5691

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C1	24.44'	15.12'	092°36'52"	15.83'
C2	31.45'	20.04'	089°54'36"	20.01'

CURVE TABLE								
CURVE #	LENGTH	RADIUS	DELTA	TANGENT	START NORTHING	START EASTING	END NORTHING	END EASTING
C16	3.06'	5.00'	035°02'27"	1.58'	9908.1086	4900.0570	9905.9589	4902.1646
C17	1.75'	2.00'	050°04'50"	0.93'	9905.4113	4903.1925	9905.3225	4904.8832
C18	1.57'	1.00'	089°59'59"	1.00'	9906.4312	4907.6226	9907.7333	4908.1744
C19	1.57'	1.00'	090°00'01"	1.00'	9914.1932	4905.5600	9914.7450	4904.2579
C20	1.66'	1.00'	094°52'43"	1.09'	9912.6121	4898.9878	9911.2325	4898.4713

**CITY OF MANHATTAN BEACH**  
PUBLIC WORKS DEPARTMENT - ENGINEERING DIVISION

**CROSSWALK IMPROVEMENT PROJECT**

**17TH STREET SITE PLAN**

DESIGNED BY  MARCO CANTA, P.E. DATE: 5/18/2023	PROJECT MANAGER  HELEN SHI, P.E. DATE: 6/22/2023	RECOMMENDED BY  KATHERINE DOHERTY DATE: 6/22/2023
SCALE: 1" = 10' SHEET 9 OF 14	DATE: 05-12-23	DRAWING NO.: T-264

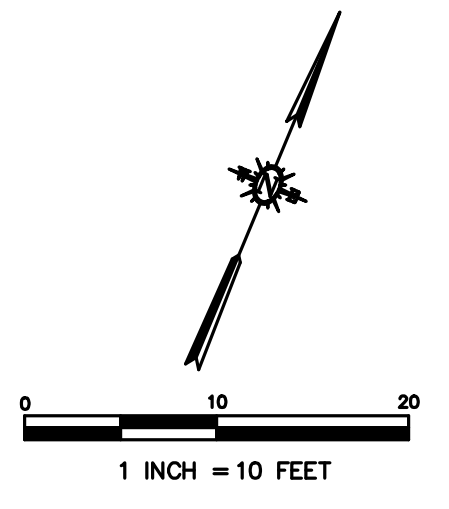
**SUPPLEMENTAL NOTES**

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- DUE TO INDIVIDUAL LOT IMPROVEMENTS, THE EXISTING WATER, SEWER AND/OR GAS LATERALS MAY NOT BE AT THE LOCATIONS SHOWN OR SHOWN IN THEIR ENTIRETY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING.
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5/18/2023 DATE SIGNED

REVISIONS	
NO.	DESCRIPTION



LINE TABLE						
LINE #	LENGTH	BEARING	START NORTHING	START EASTING	END NORTHING	END EASTING
L1	17.33'	N85°40'30"E	10278.8395	4820.5387	10280.1464	4837.8194
L2	17.33'	N85°40'30"E	10268.8679	4821.2928	10270.1748	4838.5735
L4	10.00'	N4°19'30"W	10270.1748	4838.5735	10280.1464	4837.8194
L5	71.88'	S87°28'16"W	10283.3178	4909.6254	10280.1464	4837.8194
L6	28.55'	N87°28'39"E	10270.1748	4838.5735	10271.4312	4867.0924
L8	5.00'	N87°28'52"E	10270.6744	4838.5515	10270.8941	4843.5467
L10	10.00'	S2°31'44"E	10281.6689	4872.3317	10271.6804	4872.7729
L11	5.50'	S87°15'02"W	10283.5818	4915.1191	10283.3179	4909.6254
L12	10.00'	S2°44'58"E	10283.3178	4909.6254	10273.3293	4910.1051
L13	5.50'	S87°15'02"W	10273.5933	4915.5988	10273.3294	4910.1051
L14	79.19'	S30°56'46"E	10271.4312	4867.0924	10203.5176	4907.8122
L15	76.48'	S30°56'46"E	10271.6804	4872.7729	10206.0887	4912.1004
L16	5.00'	N59°03'14"E	10238.1749	4887.0323	10240.7460	4891.3205
L17	5.00'	N59°03'14"E	10233.8866	4889.6034	10236.4578	4893.8917
L18	2.87'	S82°16'28"W	10205.9976	4915.9346	10205.6120	4913.0925
L19	8.88'	S82°16'28"W	10201.8516	4922.5676	10200.6574	4913.7647
L20	37.37'	N87°28'15"E	10271.6804	4872.7729	10273.3294	4910.1051
L21	5.00'	S59°03'14"W	10207.6675	4911.1538	10205.0964	4906.8655
L22	5.00'	S7°43'32"E	10205.8595	4914.9167	10200.9049	4915.5888
L23	13.89'	S85°40'30"W	10278.8395	4820.5387	10277.7920	4806.6882
L24	14.21'	S85°40'30"W	10268.8679	4821.2928	10267.7965	4807.1257

CURVE TABLE				
CURVE #	LENGTH	RADIUS	DELTA	TANGENT
C13	18.75'	15.00'	071°37'54"	10.82'
C14	5.51'	15.00'	021°02'22"	2.79'
C15	5.51'	15.00'	021°02'22"	2.79'
C21	6.99'	6.00'	066°46'46"	3.95'
C22	1.17'	1.00'	066°46'46"	0.66'
C23	1.57'	1.00'	089°51'45"	1.00'

**LEGEND**

- PCC
- AC PAVEMENT OVER BASE

**ABBREVIATIONS**

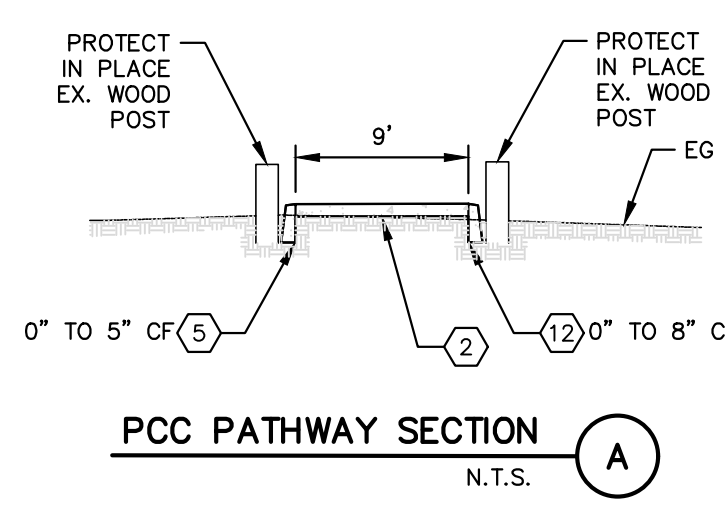
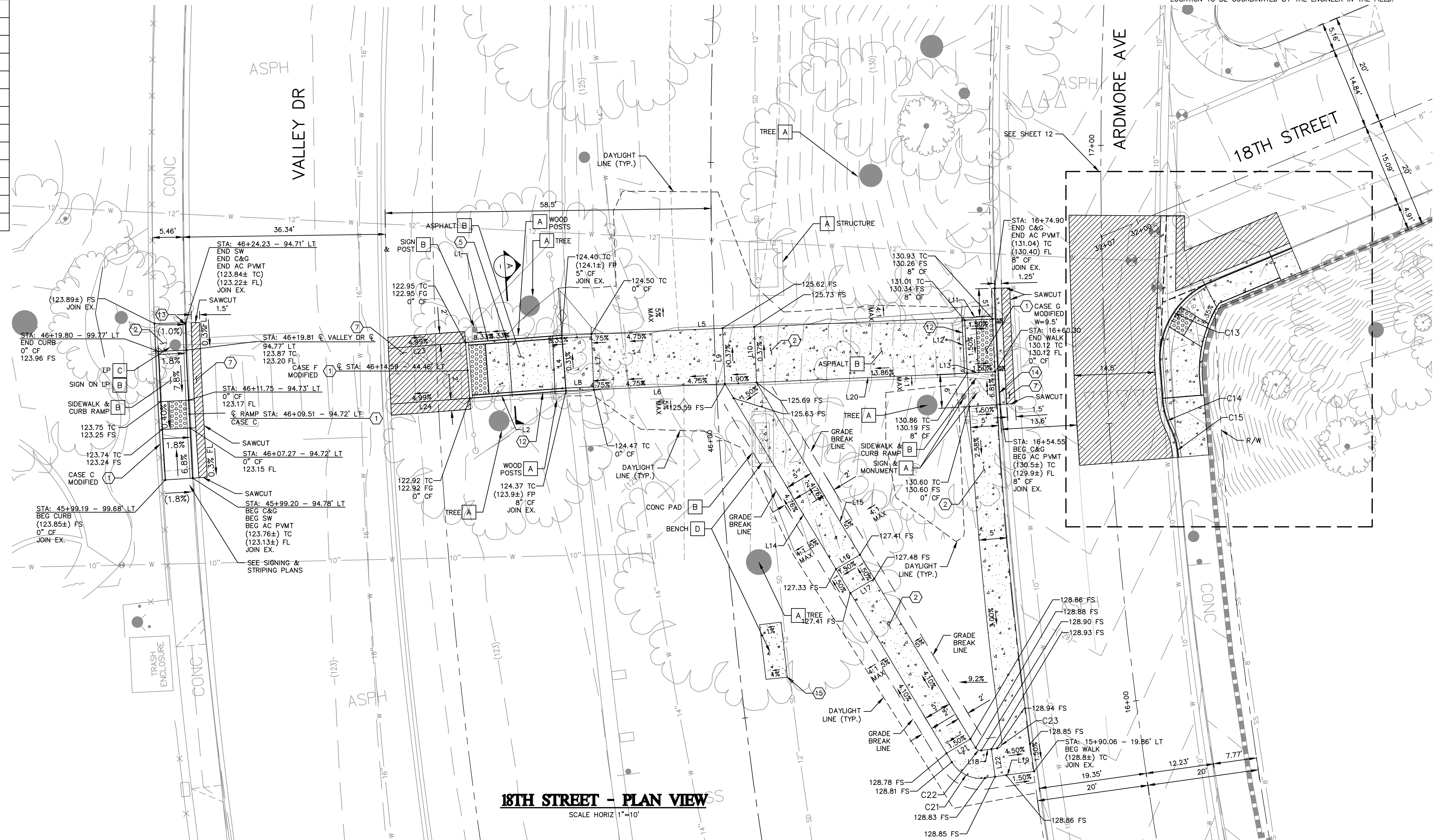
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- EX EXISTING
- FL FLOW LINE
- FS FINISHED SURFACE
- LT LEFT
- PRC POINT OF REVERSE CURVATURE
- RT RIGHT
- R/W RIGHT-OF-WAY
- SW SIDEWALK
- TC TOP OF CURB
- TYP. TYPICAL

**DISPOSITION NOTES**

- A PROTECT IN PLACE
- B REMOVE
- C ADJUST TO GRADE
- D RELOCATE

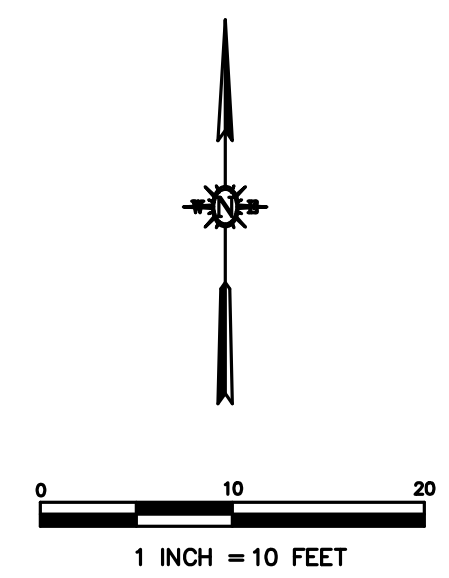
**CONSTRUCTION NOTES**

- 1 CONSTRUCT CURB RAMP PER CALTRANS STD. PLAN NO. AB8A, CASE PER PLAN.
- 2 CONSTRUCT 4" PCC SIDEWALK AND SIDEWALK JOINTS PER CITY OF MANHATTAN BEACH STD PLAN MBSI - 112A-0 (ST-2).
- 3 CONSTRUCT A1-6 CURB PER SPPWC STD PLAN 120-3.
- 4 CONSTRUCT 4" AC PAVEMENT OVER 5" AGGREGATE BASE.
- 5 CONSTRUCT A1-8 CURB PER SPPWC STD. PLAN 120-3.
- 6 CONSTRUCT 8" CURB AND 12" GUTTER PER MODIFIED CITY OF MANHATTAN BEACH STD PLAN MBSI - 120A-0(ST-3).
- 7 CONSTRUCT 8" CURB AND 15" GUTTER PER MODIFIED CITY OF MANHATTAN BEACH STD PLAN MBSI - 120A-0(ST-3).
- 8 CONSTRUCT 4"W X 10'L X 4" THICK CONCRETE PAD. EXACT LOCATION TO BE COORDINATED BY THE ENGINEER IN THE FIELD.



**18TH STREET - PLAN VIEW**  
SCALE HORIZ 1"=10'

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**SUPPLEMENTAL NOTES**

- THE CONTRACTOR SHALL LOCATE, VERIFY AND PROTECT ALL EXISTING UNDERGROUND UTILITIES. DAMAGED UTILITIES SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
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REVIEWED BY	DATE

REVISIONS		
NO.	DESCRIPTION	BY DATE

REFERENCES			

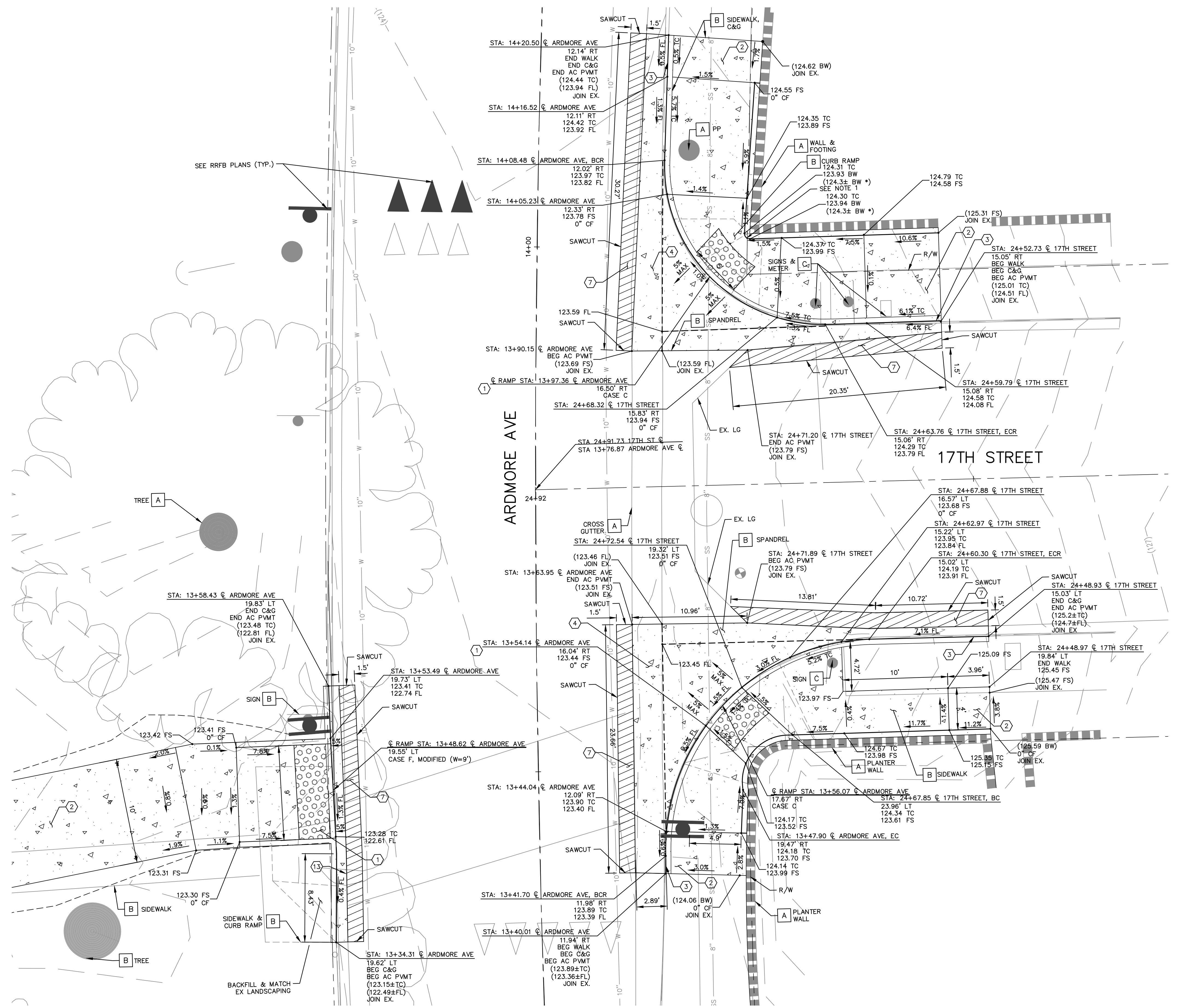
**CITY OF MANHATTAN BEACH**  
PUBLIC WORKS DEPARTMENT - ENGINEERING DIVISION

**CROSSWALK IMPROVEMENT PROJECT**

**18TH STREET SITE PLAN**

REVIEWED BY  PROJECT MANAGER HELEN SHI, P.E. DATE: 6/22/2023	RECOMMENDED BY  CITY ENGINEER KATHERINE DOHERTY DATE: 6/22/2023
DESIGNED BY  CIVIL ENGINEER MARCO CANTA, P.E. DATE: 5/18/2023	SCALE: 1" = 10' DATE: 05-12-23 SHEET 10 OF 14 DRAWING NO. T-264

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 PLOTTED BY: MarcoC DATE: May 18, 2023 TIME: 10:02 AM



**17TH STREET - PLAN VIEW**  
SCALE HORIZ 1"=5'

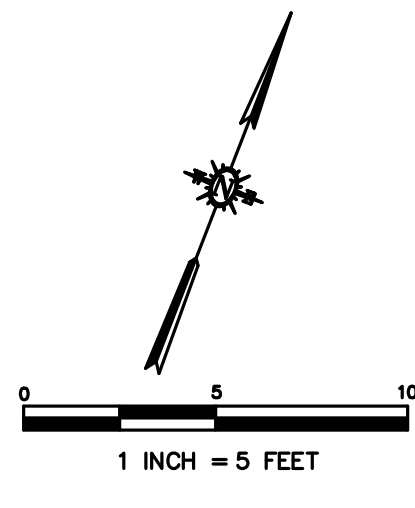
**CONSTRUCTION NOTES**

- ① CONSTRUCT CURB RAMP PER CALTRANS STD. PLAN NO. AB8A, CASE PER PLAN.
- ② CONSTRUCT 4" PCC SIDEWALK AND SIDEWALK JOINTS PER CITY OF MANHATTAN BEACH STD PLAN MBSI - 112A-0 (ST-2).
- ③ CONSTRUCT STANDARD 6" CURB AND 12" GUTTER PER CITY OF MANHATTAN BEACH STD PLAN MBSI - 120A-0(ST-3).
- ④ REMOVE EXISTING SPANDREL AND CONSTRUCT SPANDREL PER SPPWC PLAN NO. 122-3
- ⑤ CONSTRUCT 4" AC PAVEMENT OVER 5" AGGREGATE BASE.
- ⑬ CONSTRUCT 8" CURB AND 12" GUTTER PER MODIFIED CITY OF MANHATTAN BEACH STD PLAN MBSI - 120A-0(ST-3).

**DISPOSITION NOTES**

- A PROTECT IN PLACE
- B REMOVE
- C ADJUST TO GRADE

NOTES:  
 1. MINIMUM COVER BETWEEN CURB RAMP NEW FINISHED SURFACE AND TOP OF EXISTING WALL FOOTING SHALL BE 1'. IF COVER IS NOT MET, CONTRACTOR SHALL NOTIFY ENGINEER TO RECEIVE FURTHER DIRECTION BEFORE PROCEEDING WITH CONSTRUCTION.  
 \* EXISTING BACK OF WALK ELEVATIONS PROVIDED FOR CONTRACTOR REFERENCE ONLY.



**811**  
 Know what's below.  
 Call before you dig.  
 NO WORK SHALL BE DONE ON THIS SITE UNTIL USA AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE, TWO WORKING DAYS BEFORE YOU DIG.

**SUPPLEMENTAL NOTES**

1. THE CONTRACTOR SHALL LOCATE, VERIFY AND PROTECT ALL EXISTING UNDERGROUND UTILITIES. DAMAGED UTILITIES SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
2. DUE TO INDIVIDUAL LOT IMPROVEMENTS, THE EXISTING WATER, SEWER AND/OR GAS LATERALS MAY NOT BE AT THE LOCATIONS SHOWN OR SHOWN IN THEIR ENTIRETY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN EXCAVATING.
3. THE CONTRACTOR SHALL DETERMINE THE DEPTH OF THE GAS, SCE, CABLE, SEWER, STORM DRAIN AND WATER AT ALL INTERSECTIONS AND INTERFERENCES PRIOR TO CONSTRUCTION AND AS NOTED ON PLANS.



REVIEWED BY	DATE

<b>CITY OF MANHATTAN BEACH</b> PUBLIC WORKS DEPARTMENT - ENGINEERING DIVISION			
<b>CROSSWALK IMPROVEMENT PROJECT</b> ARDMORE AVENUE & 17TH STREET DETAIL			
DESIGNED BY <i>Marco Cantá</i> CIVIL ENGINEER MARCO CANTA, P.E.	DATE 5/18/2023	REVIEWED BY <i>Helena Shi</i> PROJECT MANAGER HELEN SHI, P.E.	DATE 6/22/2023
RECOMMENDED BY <i>Katherine Doherty</i> CITY ENGINEER KATHERINE DOHERTY	DATE 6/22/2023	DATE 6/22/2023	DATE 6/22/2023
SCALE 1" = 5'	DATE 05-12-23	DRAWING NO. T-264	SHEET 11 OF 14

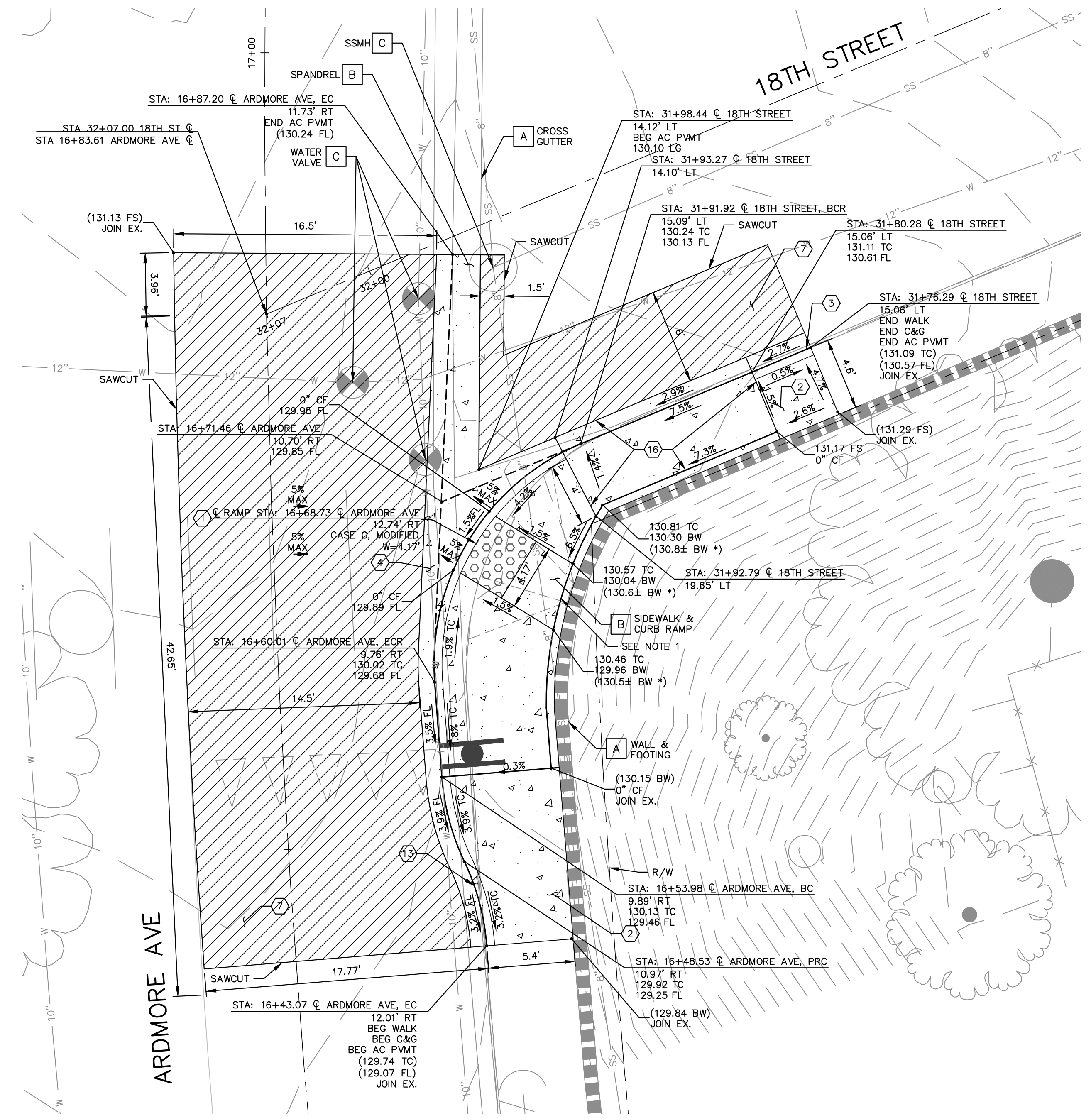
**CONSTRUCTION NOTES**

- ① CONSTRUCT CURB RAMP PER CALTRANS STD. PLAN NO. AB8A, CASE PER PLAN.
- ③ CONSTRUCT STANDARD 6" CURB AND 12" GUTTER PER CITY OF MANHATTAN BEACH STD PLAN MBSI - 120A-0(ST-3).
- ④ REMOVE EXISTING SPANDREL AND CONSTRUCT SPANDREL PER SPPWC PLAN NO. 122-3
- ⑦ CONSTRUCT 4" AC PAVEMENT OVER 5" AGGREGATE BASE.
- ⑩ INSTALL DETECTABLE WARNING SURFACE.
- ⑬ CONSTRUCT 8" CURB AND 12" GUTTER PER MODIFIED CITY OF MANHATTAN BEACH STD PLAN MBSI - 120A-0(ST-3).
- ⑯ CONSTRUCT MONOLITHIC CURB, GUTTER, AND SIDEWALK PER DETAIL 1, SHEET 12.

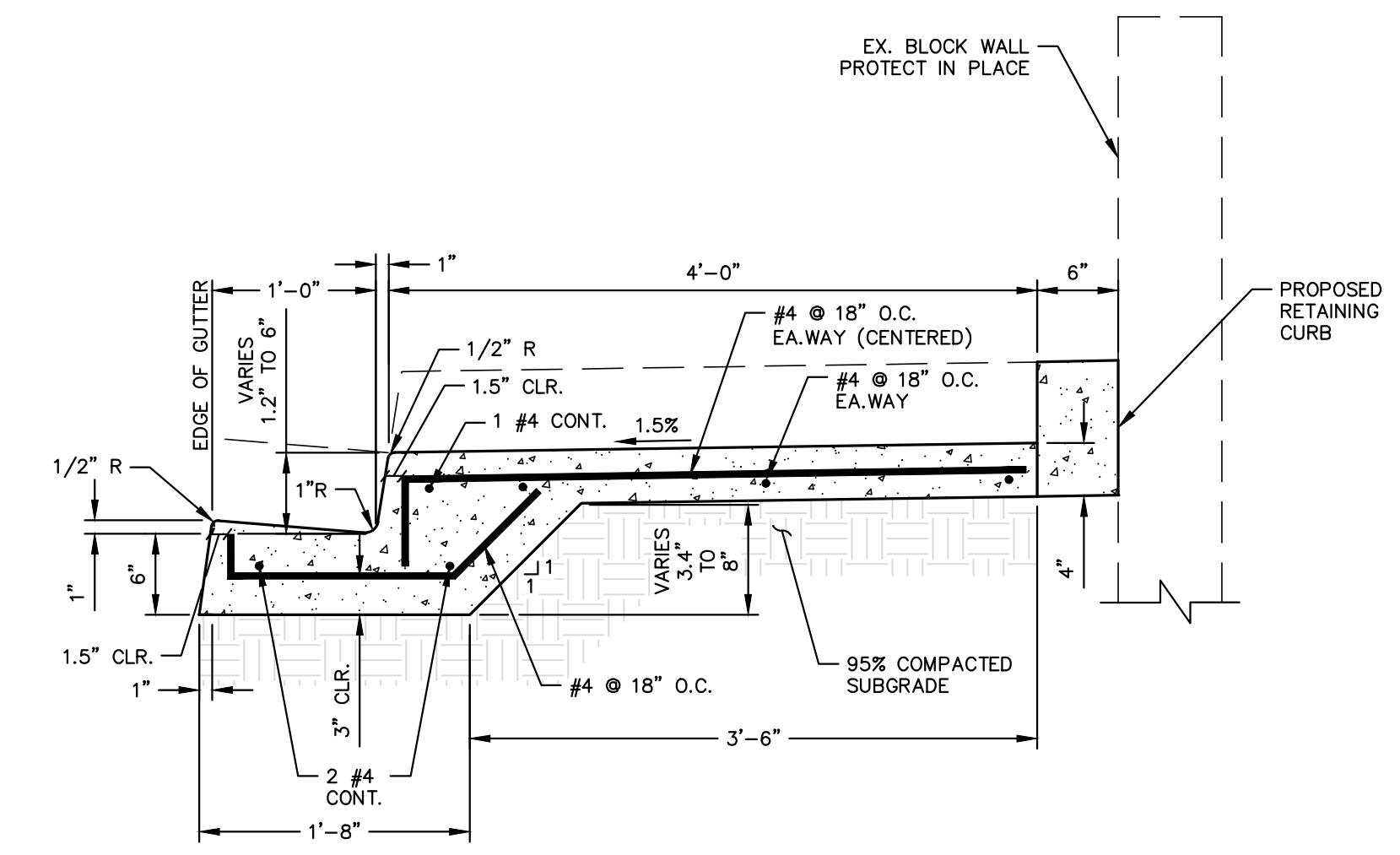
**DISPOSITION NOTES**

- A PROTECT IN PLACE
- B REMOVE
- C ADJUST TO GRADE

- NOTES:
- 1. MINIMUM COVER BETWEEN CURB RAMP NEW FINISHED SURFACE AND TOP OF EXISTING WALL FOOTING SHALL BE 1'. IF COVER IS NOT MET, CONTRACTOR SHALL NOTIFY ENGINEER TO RECEIVE FURTHER DIRECTION BEFORE PROCEEDING WITH CONSTRUCTION.
  - 2. EXISTING BACK OF WALK ELEVATIONS PROVIDED FOR CONTRACTOR REFERENCE ONLY.



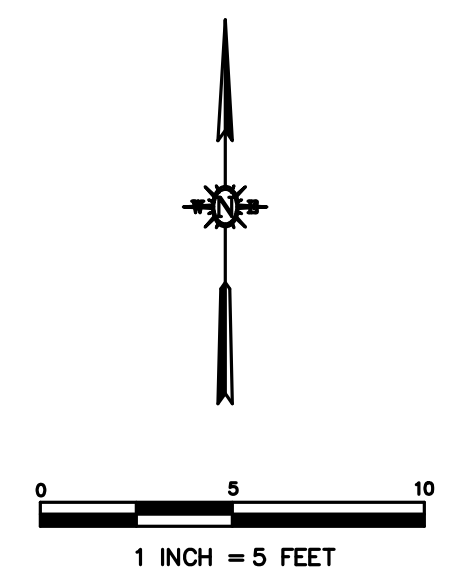
**18TH STREET - PLAN VIEW**  
SCALE HORIZ 1"=5'



- NOTES:
- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION," MOST RECENT EDITION, AND ALL SUPPLEMENTS THERETO TO THE SATISFACTION OF THE ENGINEER.
  - 2. PORTLAND CEMENT CONCRETE SHALL BE CLASS 560-C-3250, CURED WITH WHITE PIGMENTED CURING COMPOUND, 4" MAX SLUMP.
  - 3. FINISH SHALL BE FINE BRUSH PARALLEL TO THE CURB LINE AND TROWEL SMOOTH FINISH FOR THE GUTTER FLOWLINE.

**MONOLITHIC CURB, GUTTER & SIDEWALK DETAIL 1**  
SHEET 12

PLOTTED BY: MarccC DATE: May 18, 2023 TIME: 10:01 AM  
 F:\proj\2021\210630\4 Production and Drafting\Const Dwg\Civil\CE210630SD0001.dwg



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**SUPPLEMENTAL NOTES**

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REVIEWED BY	DATE

<b>CITY OF MANHATTAN BEACH</b> PUBLIC WORKS DEPARTMENT - ENGINEERING DIVISION	
<b>CROSSWALK IMPROVEMENT PROJECT</b> ARDMORE AVENUE & 18TH STREET DETAIL	
REVISIONS NO. DESCRIPTION BY DATE	RECOMMENDED BY KATHERINE DOHERTY DATE: 6/22/2023
REFERENCES	PROJECT MANAGER HELEN SHI, P.E. DATE: 5/19/2023
DESIGNED BY MARCO CANTA, P.E. DATE: 5/19/2023	DRAWING NO. <b>T-264</b>
SCALE 1" = 10'	DATE 05-12-23
SHEET 12 OF 14	DATE 6/22/2023