CITY OF MORENO VALLEY
STANDARD PLANS

SECTION 7

ELECTRIC UTILITY

SECTION 6: General Facilities (Continued)

Building Facilities

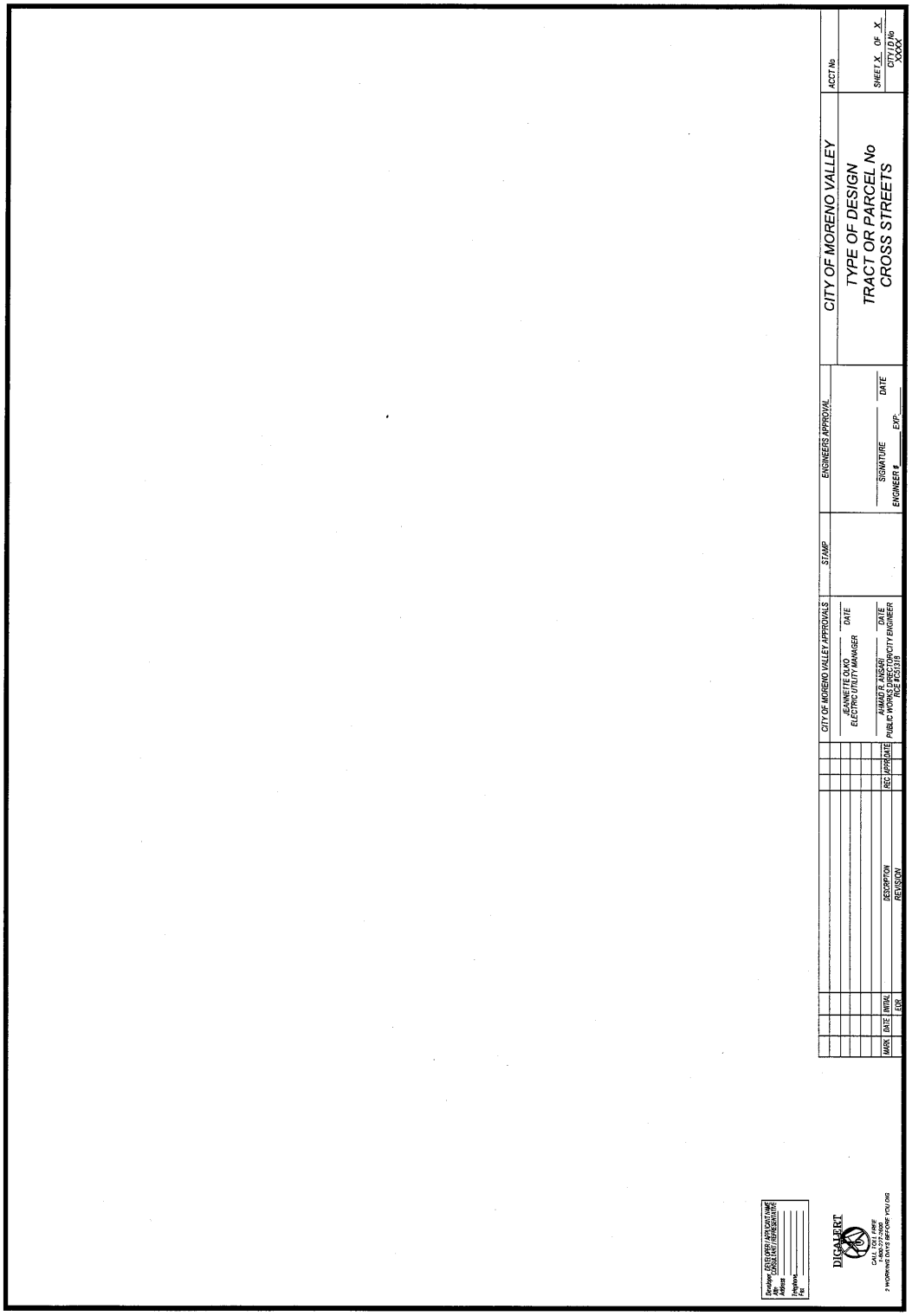
MVGF-670A-0	*Facility Dedication Plaque*
MVGF-670B-0	*Dedication Plaque Pedestal*

SECTION 7: Electric Utility

MVEU-700-0	*Title Sheet Base (for Electric Utility Division)*
MVEU-701-0	*Conduits & Cable Call-Outs*
MVEU-702-0	*Structure & Equipment Symbols*
MVEU-703-1	*Equipment Legends*
MVEU-704-0	*Vicinity & Project Map*
MVEU-705-0	*Approved Status Stamp*
MVEU-706A-0	*Designer Declaration*
MVEU-706B-0	*Engineer's Notice to Contractor*
MVEU-707A-0	*Statement of Plan Review*
MVEU-707B-0	*Statement of Plan Review*
MVEU-708-0	*Design Information*
MVEU-709-1	*Dry Utilities Trench Section*
MVEU-710A-0	*Electrical Singleline Diagram Residential*
MVEU-710B-0	*Electrical Singleline Diagram Backbone*
MVEU-711A-0	*48" x 54" Pad for Pad Mounted & Mini Pad Mounted Transformer*
MVEU-711B-0	*Mini Pad Mounted Transformer Cable Connections*
MVEU-712-1	*66" x 72" Pad for 75kVA - 300kVA Pad Mounted Transformers*
MVEU-713-0	*72" x 94" Pad for 75kVA - 500kVA Pad Mounted Transformers*
MVEU-714-0	*6' x 8'-6" Pad with Box for 75kVA-500kVA Pad Mounted Transformers*
MVEU-715-0	*8' x 10' Pad with Box for 750kVA-1000kVA Pad Mounted Transformers*
MVEU-716-0	*10' x 12' Pad with Box for 1500kVA - 2500kVA Pad Mounted Transformers*
MVEU-717-0	*72" x 94" Pad for Pad-Mounted Capacitors*
MVEU-718-0	*Pad Mounted Switch Enclosure Detail 5' x 10'-6" x 7'*
MVEU-719-0	*17" x 30" x 24" Pull Box for Service Connection*
MVEU-720-0	*10.5" x 17" x 24" Pull Box for Street Light Connection*
MVEU-721-0	*Precast Concrete Parkway Enclosure 2' x 3' x 5' and 3' x 5' x 5'*
MVEU-722-0	*Protective Barriers for Equipment and Structures Subject to Traffic Locations*
MVEU-723-0	*Retaining Walls for Pad-Mounted Switches and Transformers*
MVEU-724A-2	*Joint Trench Details for Conduit Installations*
MVEU-724B-2	*Electric Only Trench Details for Conduit Installations*
MVEU-725-0	*Surface Operable Enclosure 5' x 8.5' x 5'*
MVEU-726-0	*Vault 6' x 12' x 7'*
MVEU-727A-0	*Conduit Bank Requirements - Installation in a Bore*

SECTION 7: Electric Utility (Continued)

MVEU-727B-0	*Conduit Bank Requirements*
MVEU-728A-0	*Manhole 5' x 10.5' x 7'*
MVEU-728B-0	*Manhole 4' x 6.5' x 7'*
MVEU-729A-0	*Project Sign- Electrical Distribution Project*
MVEU-729B-0	*Project Completion Sign- Electrical Distribution Project*
MVEU-730A-0	*Vault 7' x 14' x 8'*
MVEU-730B-0	*Vault 7' x 18' x 8'*
MVEU-730C-0	*4' x 6' Pad w/ 2.5' x 4' Box for PMH-4 or PMH-5 Switchgear*
MVEU-731-0	*Support for Conduits on Bridges*
MVEU-732A-0	*Alternate Supports for Conduits on Bridges*
MVEU-732B-0	*Alternate Supports for Conduits on Bridges*
MVEU-733-0	*Expansion Joint for Plastic Conduit*



NOT TO SCALE

CITY OF MORENO VALLEY
DECEMBER 3, 1984

RECOMMENDED:

DIVISION MANAGER — DATE 12-27-16

APPROVED:

PUBLIC WORKS DIRECTOR / CITY ENGINEER — DATE 12/20/16

CITY OF MORENO VALLEY

PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION

TITLE SHEET BASE (FOR ELECTRIC UTILITY DIVISION)

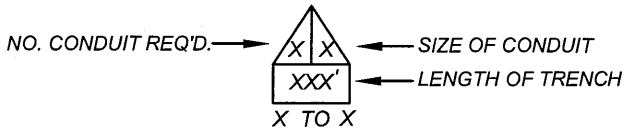
STANDARD PLAN

MVEU-700-0

SHEET 1 OF 1

CONDUIT & CABLE CALL-OUT DESIGNATION

PRIMARY CONDUIT SYSTEM

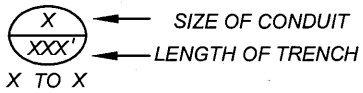


LENGTH OF CABLE - SIZE OF CABLE

CABLE
LENGTH KV

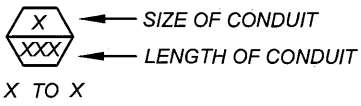
S-XXX TO S-XXX
RUN
EQ PULL= X,XXX

SECONDARY CONDUIT SYSTEM



LENGTH OF CABLE - SIZE OF CABLE

STREET LIGHT SYSTEM



LENGTH OF CABLE - SIZE OF CABLE

SL NUMBERING = SL - YYY - # - MV

YYY = TRANSFORMER NUMBER

= SL SEQUENCE NUMBER

MV = MORENO VALLEY DESIGNATOR

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3,1984	RECOMMENDED: DIVISION MANAGER 12-27-16 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/20/17 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION
		CONDUIT & CABLE CALL-OUTS
		STANDARD PLAN MVEU-701-0 SHEET 1 OF 1

LEGEND OF STRUCTURES

VAULT 

MANHOLE 

SOE 

PULL BOX 

STREET LIGHT 

HANDHOLE 

PAD 

PME/SUBSURFACE STRUCTURE 

PAD MOUNTED TRANSFORMER/SLAB BOX 

METER PEDESTAL 

LEGEND OF EQUIPMENT SYMBOLS

PM TRANSFORMER-1PH 

PM TRANSFORMER-3PH-RADIAL 

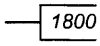
PM TRANSFORMER-3PH-LOOPING 

SWITCH-PME9 

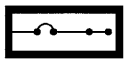
SWITCH-PME10 

SWITCH-PME11 

LBFC (LOAD BREAK FUSE CABINET) 

CAPACITOR BANK 

SWITCH-GAS INSULATED 

INTERCONNECT PANEL 

METER PEDESTAL 

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: 12-27-16 DIVISION MANAGER / DATE APPROVED: 1/20/17 PUBLIC WORKS DIRECTOR / CITY ENGINEER / DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **STRUCTURE & EQUIPMENT SYMBOLS** STANDARD PLAN **MVEU-702-0** SHEET 1 OF 1

EQUIPMENT LEGEND AND NOTES

FOR ELECTRICAL DRAWINGS

SL___	= STREET LIGHT
T____	= TRANSFORMER PAD & XFMR NUMBER
X___	= SPLICE BOX
S___	= PAD MOUNT SWITCH ENCLOSURE & SWITCH NUMBER
C___	= CAPACITOR
H___	= HANDHOLE
LBFC__	= LOAD BREAK FUSE CABINET
M___	= MANHOLE/SOE
V___	= VAULT

RESIDENTIAL APPLICATIONS:

- TRANSFORMERS ARE 6.9 kV NF 120/240V 1ph, PAD MOUNTED WITH LOAD BREAK BUSHINGS.
- NON-FUSED HV CABLES IS 1/0 AWG AL 6.9kV JCN OR CIC.
- FUSED HV CABLE IS #2 AWG AL 6.9kV JCN OR CIC.
- SECONDARY CABLE IS 2-350 & 1-4/0 AL OR 2 4/0 & 1 1/0, 600V CLP UNLESS OTHERWISE SPECIFIED.
- SERVICE CABLE IS 2-1/0 & 1/-#2 AL 600V CLP UNLESS OTHERWISE SPECIFIED.
- PRIMARY & SECONDARY CONDUITS ARE 3" UNLESS OTHERWISE SPECIFIED.
- SERVICE CONDUITS ARE 2 1/2" OR 3".
- BACKBONE SYSTEMS ARE AS DESIGNED PER NON-RESIDENTIAL CRITERIA.
- STREET LIGHTING SYSTEMS REQUIRE 2" CONDUIT BETWEEN SPLICE BOXES UNLESS OTHERWISE SPECIFIED.
- ALL 200A CABLE TERMINATIONS ARE LOAD BREAK ELBOWS.

COMMERCIAL, INDUSTRIAL AND OTHER NON-RESIDENTIAL APPLICATIONS:

- TRANSFORMERS ARE NEW 12kV, FUSED SWITCHED 1ph OR 3ph (AS END USER REQUIREMENTS) PAD MOUNTED WITH LOAD BREAK ELBOWS.
- SWITCHES ARE 14.4kV NOMINAL PAD MOUNTED TYPE.
- CAPACITORS ARE 1200kVAR OR 1800kVAR, 12kV PAD MOUNTED, SWITCHED WITH FLOATING WYE CONNECTION WITH CONTROLLER.
- NON-FUSED HV CABLES ARE 1000 kcmil, 750 kcmil, 350 kcmil, 1/0 AWG AL 12kV JCN.
- FUSED HV CABLE IS #2 AWG AL 12kV JCN UNLESS OTHERWISE SPECIFIED.
- SECONDARY CABLE IS 3-350 & 1-4/0 AL 600V CLP UNLESS OTHERWISE SPECIFIED.
- SECONDARY & SERVICE CABLE IS 700kcmil, 350kcmil, 4/0kcmil, 1/0 AWG OR #2 AWG AL 600V CLP (AS PER END USER REQUIREMENTS).
- STRUCTURES ARE SUBSURFACE TYPE.
- PRIMARY CONDUITS ARE 5". UNLESS OTHERWISE SPECIFIED.
- SERVICE CONDUITS ARE 4" OR 5" AS SPECIFIED IN THE DISTRIBUTION DESIGN STANDARDS.
- COMMUNICATION CONDUITS ARE 2" AND INCLUDED WITH ALL BACKBONE (MAIN LINE) SYSTEMS.
- STREET LIGHTING SYSTEMS REQUIRE 2" CONDUIT BETWEEN SPLICE BOXES UNLESS SPECIFIED OTHERWISE.

NOTE:

1. CONDUITS ARE DB-100 OR SCH 40-80 WHERE EXPOSED TO SUNLIGHT.
2. THE ABOVE CRITERIA DEFINE THE GENERAL REQUIREMENTS FOR THE DESIGN OF THE ELECTRICAL SYSTEMS. FOR SPECIFIC DESIGN APPLICATIONS REFER TO THE CITY OF MORENO VALLEY DISTRIBUTION DESIGN CRITERIA. IT CAN BE OBTAINED AT THE MORENO VALLEY UTILITY OFFICE.
3. ORANGE INSULATED COPPER CLAD STEEL TRACER WIRE PER KRISTECH SPECIFICATIONS SHEET, OR EQUAL. TRACER WIRE TO BE INSTALLED 2" ABOVE COMMUNICATION CONDUIT PER "THE COMPLETE UTILITY LOCATING SYSTEM SPECIFICATIONS FOR TELECOMMUNICATIONS" BY COPPERHEAD INDUSTRIES, OR EQUIVALENT.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3,1984

RECOMMENDED:

DIVISION MANAGER — DATE 1-20-22

APPROVED:

PUBLIC WORKS DIRECTOR / CITY ENGINEER — DATE 2/4/22

CITY OF MORENO VALLEY

FINANCIAL & MANAGEMENT SERVICES DEPARTMENT - ELECTRIC UTILITY DIVISION

EQUIPMENT LEGENDS

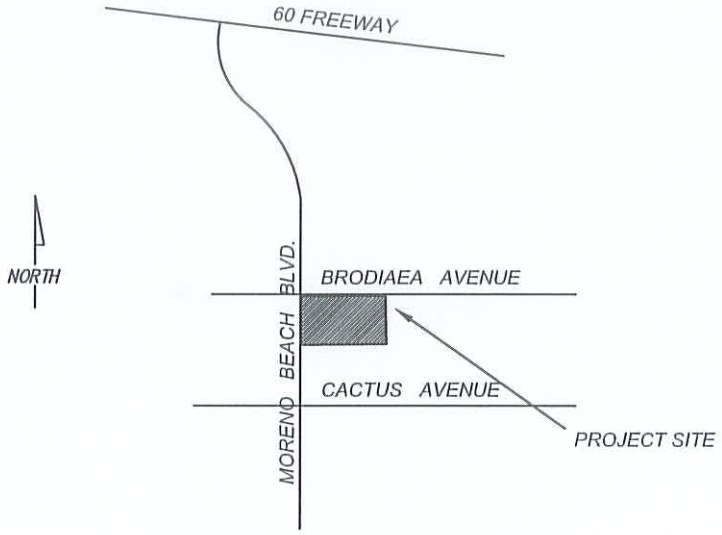
STANDARD PLAN

MVEU-703-1

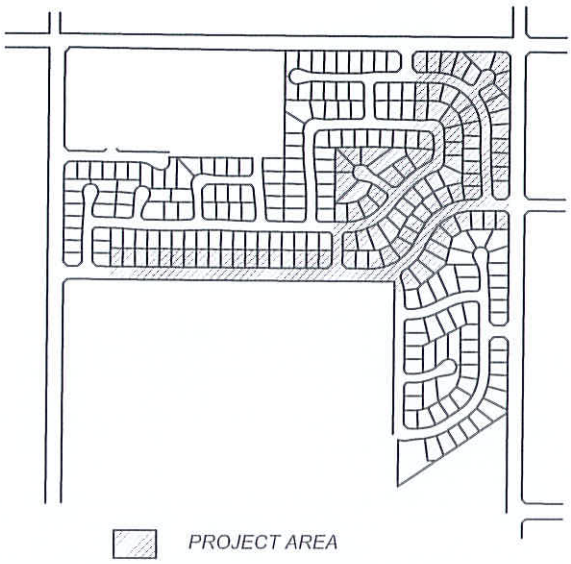
SHEET 1 OF 1

EXAMPLE-VICINITY MAP

NO SCALE RIV CO. 807 H2 (THOMAS GUIDE REFERENCE)



EXAMPLE-PROJECT MAP



NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION VICINITY & PROJECT MAP STANDARD PLAN MVEU-704-0 SHEET 1 OF 1

PLANS ARE
APPROVED FOR CONSTRUCTION
WHEN SIGNED BY
THE PUBLIC WORKS DIRECTOR/CITY ENGINEER

NOT TO SCALE

CITY OF MORENO VALLEY · DECEMBER 3, 1984	RECOMMENDED: 1-15-14 DIVISION MANAGER DATE APPROVED: 1/29/14 PUBLIC WORKS DIRECTOR / CITY ENGINEER DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **APPROVED STATUS STAMP**	STANDARD PLAN **MVEU-705-0** SHEET 1 OF 1

DECLARATION OF DESIGN

THE DESIGN OF THE ELECTRICAL POWER SYSTEM AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES INCLUDING OBSERVANCE OF MINIMUM VERTICAL AND HORIZONTAL DISTANCES, IN ACCORDANCE WITH APPLICABLE REGULATIONS, FROM EXISTING FACILITIES INCLUDING BUT NOT LIMITED TO WATER AND SEWER LINES, STORM DRAINS, TELECOMMUNICATIONS AND CABLE TELEVISION SYSTEMS. THE DESIGN INCORPORATES PROPER SEPARATION FROM SUCH FACILITIES TO BE INSTALLED AS PART OF THE DEVELOPMENT.

NAME _____ DATE _____

ADDRESS _____ PHONE _____

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 12-22-16 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION
	APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/20/17 DATE	**DESIGNER DECLARATION**
		STANDARD PLAN **MVEU-706A-0**
		SHEET 1 OF 2

ENGINEER'S NOTICE TO CONTRACTORS

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OF STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN FIELD BY THE CONTRACTOR, SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURE TO PROTECT ANY UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 12-27-16 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/20/17 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **ENGINEER'S NOTICE TO CONTRACTORS**	STANDARD PLAN **MVEU-706B-0** SHEET 2 OF 2

Statement of Plan Review

Electrical Distribution Plan Check.

ENCO Utility Services, an agent for the City of Moreno Valley, has reviewed the electrical distribution plans on Tract #_____ for conformance to City Standards and general electrical design. ENCO recommends these plans for City approval.

Name: _____

ENCO Utility Services

_____

Signed *Date*

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: 1-15-14 DIVISION MANAGER DATE APPROVED: 1/29/14 PUBLIC WORKS DIRECTOR / CITY ENGINEER DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **STATEMENT OF PLAN REVIEW**	STANDARD PLAN **MVEU-707A-0** SHEET 1 OF 2

Statement of Plan Review

Electrical Distribution Plan Check.

Moreno Valley Electric Utility (MVU) has reviewed the electrical distribution plans on Tract #_____ for conformance to City Standards and general electrical design. MVU recommends these plans for approval.

Name: _____

MVU Electric Engineering

_____

Signed *Date*

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **STATEMENT OF PLAN REVIEW**	STANDARD PLAN **MVEU-707B-0** SHEET 2 OF 2

LOAD INFORMATION

AVG. HOME SIZE	SQ FEET
AVG. A/C	TON(s)
LARGEST A/C UNIT	TON(s)
PANEL SIZE	AMPS
DESIGN KW/UNIT	KW
NUMBER OF UNITS	
NO. OF STREET LIGHTS	

XFMR DESIGN PARAMETERS

CUST/50 KVA XFMR	MAX. UNITS
CUST/75 KVA XFMR	MAX. UNITS
CUST/100 KVA XFMR*	MAX. UNITS

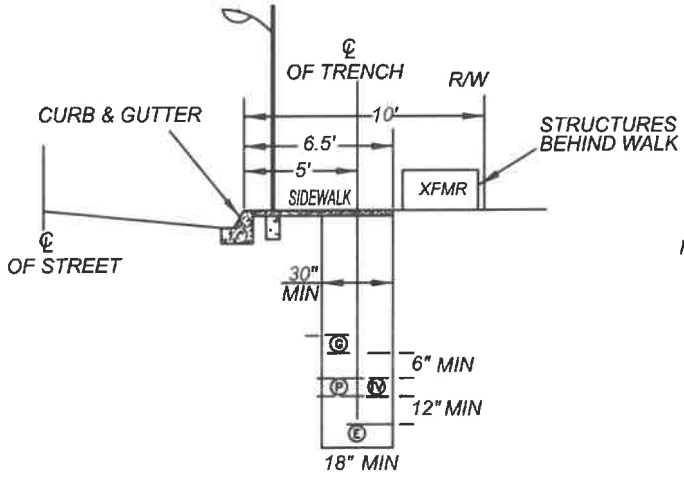
* MULTI-FAMILY ONLY.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **DESIGN INFORMATION**	STANDARD PLAN **MVEU-708-0** SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-709-1

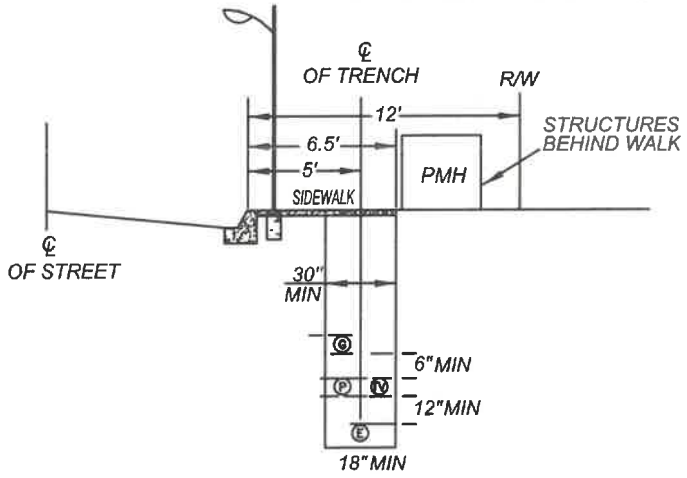
3,800 LUMENS, LED, 120v, FLAT CUT-OFF
WITH MARBELITE POLES
SEE STD PLAN MVLT-400A



NOTE:
XFMR - TRANSFORMER
PMH - PAD MOUNT ENCLOSE

TRENCH DETAIL
RESIDENTIAL & COLLECTOR STREETS

11,500 LUMENS, LED, 120v FLAT CUT-OFF
WITH MARBELITE POLES
SEE STD PLAN MVLT-400B AND/OR MVLT-400C



TRENCH DETAIL
ARTERIAL STREET

NOTE:

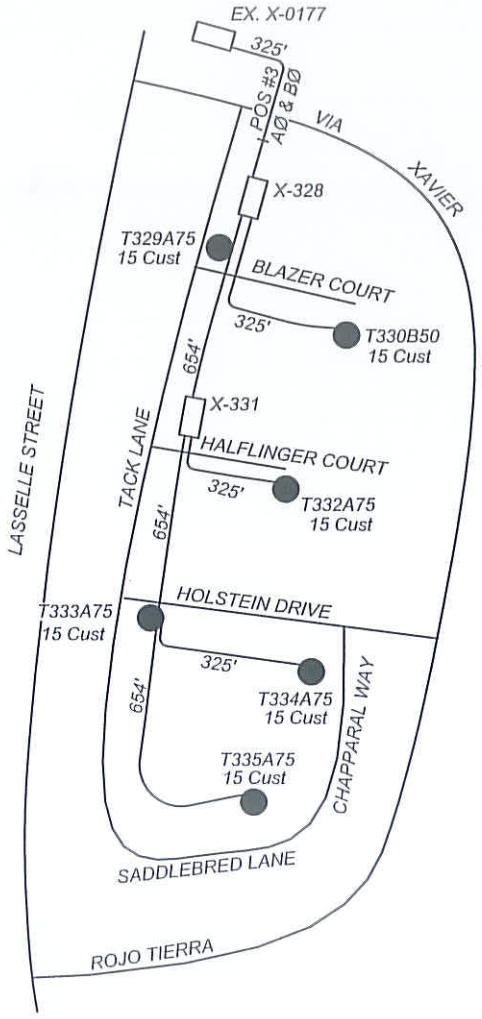
1. ORANGE INSULATED COPPER CLAD STEEL TRACER WIRE PER KRISTECH SPECIFICATIONS SHEET, OR EQUAL. TRACER WIRE TO BE INSTALLED 2" ABOVE COMMUNICATION CONDUIT PER "THE COMPLETE UTILITY LOCATING SYSTEM SPECIFICATIONS FOR TELECOMMUNICATIONS" BY COPPERHEAD INDUSTRIES, OR EQUIVALENT.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: 12-27-2021 DIVISION MANAGER / DATE APPROVED: 2/4/22 PUBLIC WORKS DIRECTOR / CITY ENGINEER / DATE	CITY OF MORENO VALLEY FINANCIAL & MANAGEMENT SERVICES DEPARTMENT - ELECTRIC UTILITY DIVISION **DRY UTILITIES TRENCH SECTION**
		STANDARD PLAN **MVEU-709-1** SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-710A-0

RESIDENTIAL SINGLELINE



NOTES:

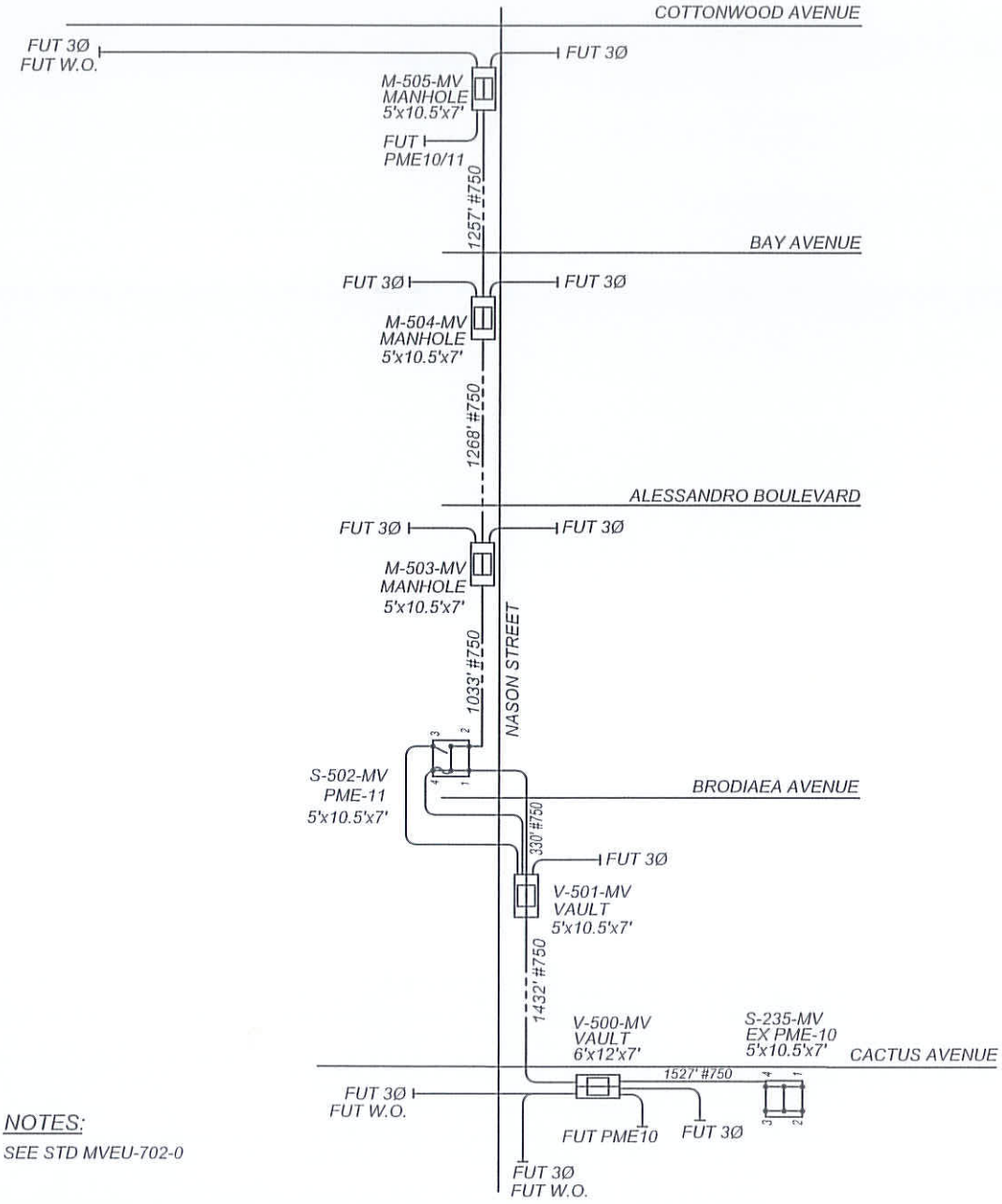
1. SEE STD MVUE-702-0

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION ELECTRIC SINGLELINE DIAGRAM RESIDENTIAL	STANDARD PLAN MVEU-710A-0 SHEET 1 OF 2

MORENO VALLEY STANDARD NO. MVEU-710B-0

BACKBONE RESIDENTIAL SINGLELINE



NOTES:

1. SEE STD MVEU-702-0

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **ELECTRICAL SINGLELINE DIAGRAM BACKBONE** STANDARD PLAN **MVEU-710B-0** SHEET 2 OF 2

MORENO VALLEY STANDARD No MVEU-711A-0

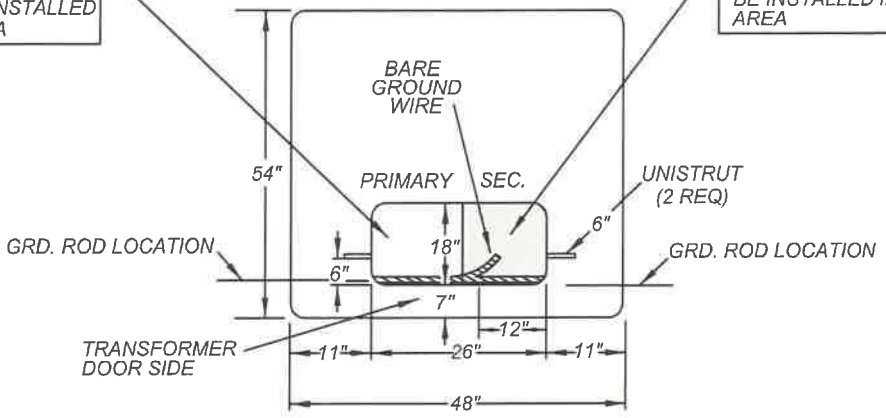
48" x 54" PAD FOR PAD MOUNTED & MINI PAD MOUNTED TRANSFORMER

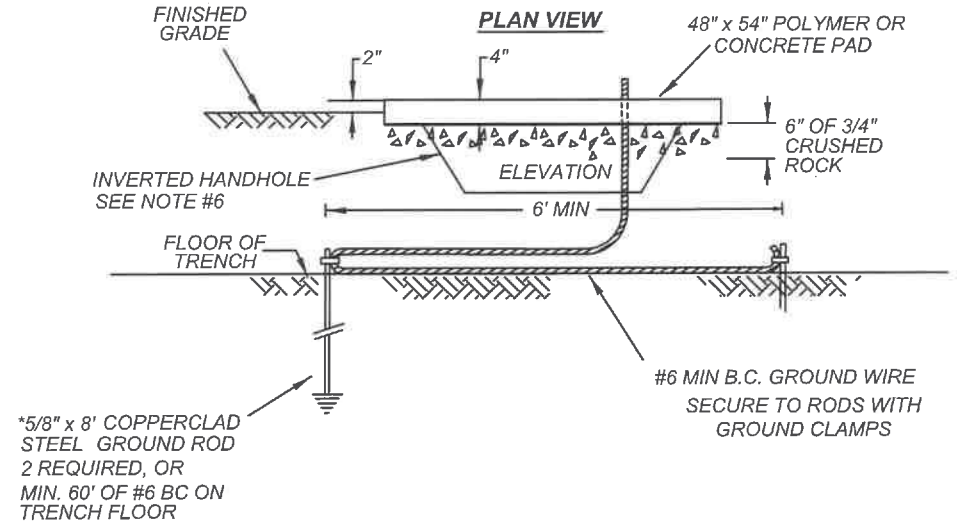
PAD MOUNTED & MINI PAD MOUNTED TRANSFORMERS

SECONDARY AREA
SECONDARY AND SERVICE CABLES MUST BE INSTALLED IN UNSHADED AREA

PAD MOUNTED & MINI PAD MOUNTED TRANSFORMERS

PRIMARY AREA
PRIMARY CABLES MUST BE INSTALLED IN SHADED AREA





*GROUNDING MATERIALS FURNISHED AND INSTALLED BY CONTRACTOR.

NOTES:

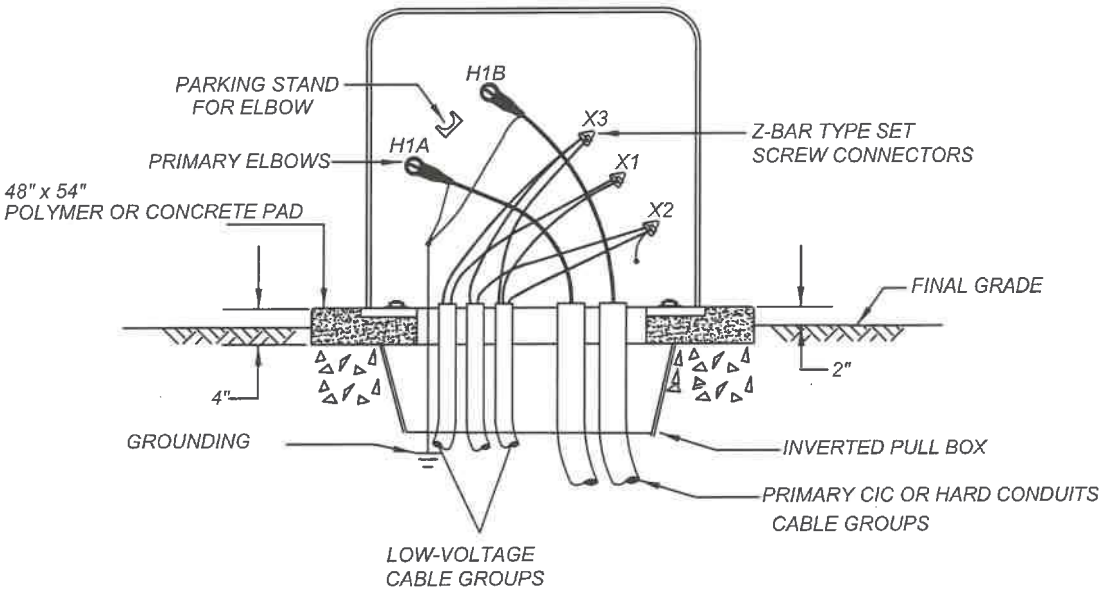
1. 8' UNOBSTRUCTED FLAT WORKING CLEARANCE IS REQUIRED AT FRONT OF PAD. (MEASURED FROM EDGE OF PAD)
2. 3' UNOBSTRUCTED CLEARANCE IS REQUIRED AT BACK OF PAD. (MEASURED FROM EDGE OF PAD)
3. 3' CLEARANCE IS REQUIRED ON BOTH SIDES OF PAD. (MEASURED FROM EDGE OF PAD)
4. MASTIC SEALANT REQUIRED AT JOINTS AND GAPS AROUND TRANSFORMER ENCLOSURE.
5. SEE STDS MVEU-711B-0, MVEU-722-0, & MVEU-723-0 FOR ADDITIONAL DETAILS.
6. INVERTED HH 13"x24"x15" REQUIRED FOR ALL MINI PAD MOUNTED TRANSFORMERS AND ALL DUCT INSTALLATIONS

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 6.20.19 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 7/30/19 DATE	CITY OF MORENO VALLEY FINANCIAL & MANAGEMENT SERVICES DEPARTMENT - ELECTRIC UTILITY DIVISION **48" x 54" PAD FOR PAD MOUNTED & MINI PAD MOUNTED TRANSFORMER** STANDARD PLAN **MVEU-711A-0** SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-711B-0

TYPICAL REQUIREMENTS FOR 6.9 KV SINGLE-PHASE MINI-PAD MOUNTED TRANSFORMER



NOTES:

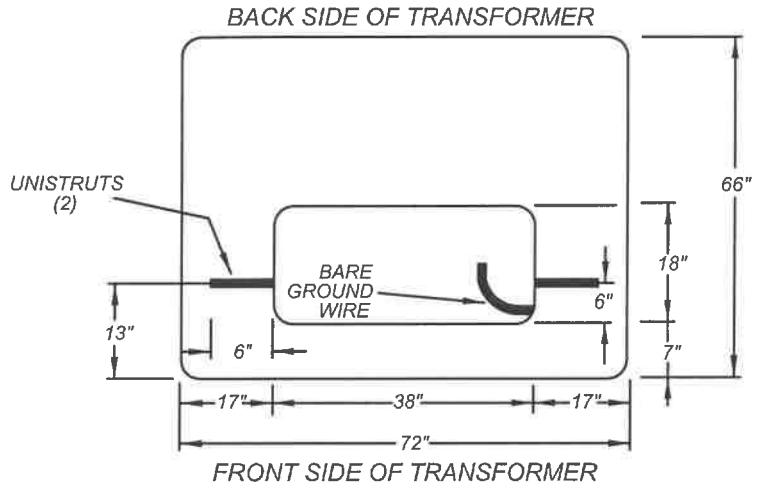
1. A MAXIMUM OF 6 LOW-VOLTAGE CABLES CAN BE PLACED INTO A MINI-PAD MOUNT TRANSFORMER. ONE CABLE RUN IS EITHER ONE SECONDARY OR ONE SERVICE RUN (MAXIMUM 350 KCMIL), UP TO TWO ADDITIONAL #8 STREET LIGHT RUNS MAY BE ADDED.
2. USE ALUMINUM BAR-TYPE SET-SCREW CONNECTORS.
3. USE OF MINI-PAD MOUNT TRANSFORMER REQUIRES A 13"x24"x 15" INVERTED PLASTIC PULL BOX UNDER THE CABLE OPENING IN THE PAD. THIS IS NECESSARY TO PROVIDE ADEQUATE CABLE SLACK FOR OPERATION OF THE LOADBREAK/DEADBREAK ELBOWS. SEAL THE BOTTOM OF THE HANDHOLE OPENING AROUND THE CIC OR CONDUITS WITH A THIN LAYER OF REDI-CRETE (OR EQUIVALENT) FOR RODENT OR WEED CONTROL.
4. GAPS BETWEEN CONCRETE OR POLYMER PADS AND PAD-MOUNTED EQUIPMENT SHALL BE SEALED TO PREVENT A PERSON FROM PASSING A WIRE OR OTHER CONDUCTING MATERIAL INTO THE COMPARTMENT WITH EXPOSED LIVE PARTS. (G.O. 128, 34.3). THIS WILL ALSO PREVENT TAMPERING, REDUCE MOISTURE ENTRY, AND DETER RODENT/VERMINE NESTING INSIDE THE EQUIPMENT.

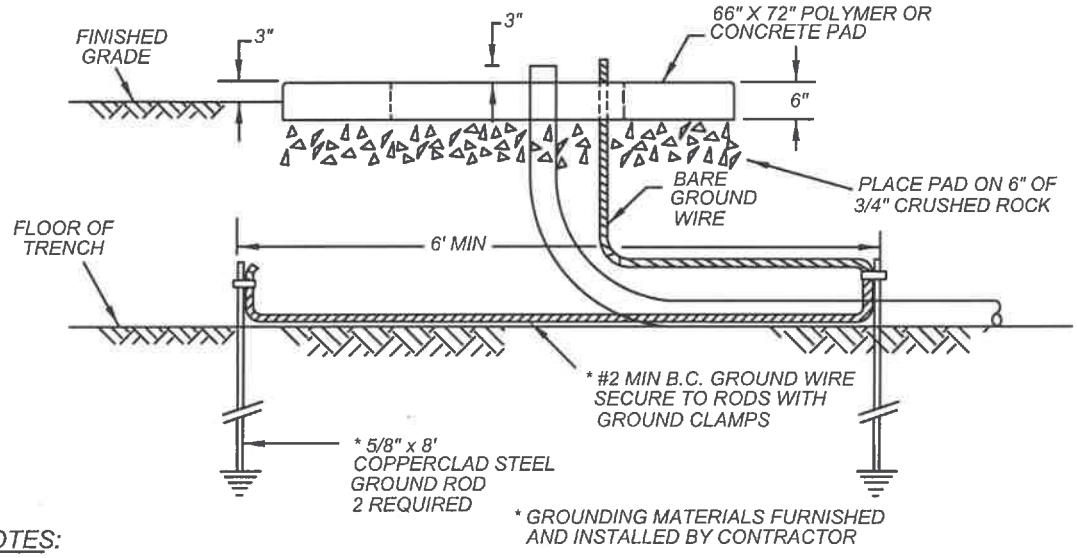
NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 6-20-19 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 7/30/19 DATE	CITY OF MORENO VALLEY FINANCIAL & MANAGEMENT SERVICES DEPARTMENT - ELECTRIC UTILITY DIVISION **MINI PAD MOUNTED TRANSFORMER CABLE CONNECTIONS**	STANDARD PLAN **MVEU-711B-0** SHEET 1 OF 1

MORENO VALLEY STANDARD No MVEU-712-1

66" x 72" PAD FOR 75kVA-300kVA PAD MOUNTED TRANSFORMERS





NOTES:

1. 8' UNOBSTRUCTED FLAT WORKING CLEARANCE IS REQUIRED AT FRONT OF PAD. (MEASURED FROM EDGE OF PAD)
2. 3' UNOBSTRUCTED CLEARANCE IS REQUIRED AT BACK OF PAD. (MEASURED FORM EDGE OF PAD)
3. 3' CLEARANCE IS REQUIRED ON BOTH SIDES OF PAD. (MEASURED FROM EDGE OF PAD)
4. MASTIC SEALANT REQUIRED AT JOINTS AND GAPS AROUND TRANSFORMER ENCLOSURE.
5. REFER TO STDS MVEU-722-0 & MVEU-723-0 FOR ADDITIONAL DETAILS.
6. THE THREE-PHASE TRANSFORMER SHOULD ONLY BE USED ON A PAD WHEN FOUR OR FEWER SERVCES ARE TO BE INSTALLED. A SLAB BOX SHOULD BE USED WHEN MORE THAN FOUR SERVICES WILL BE INSTALLED.

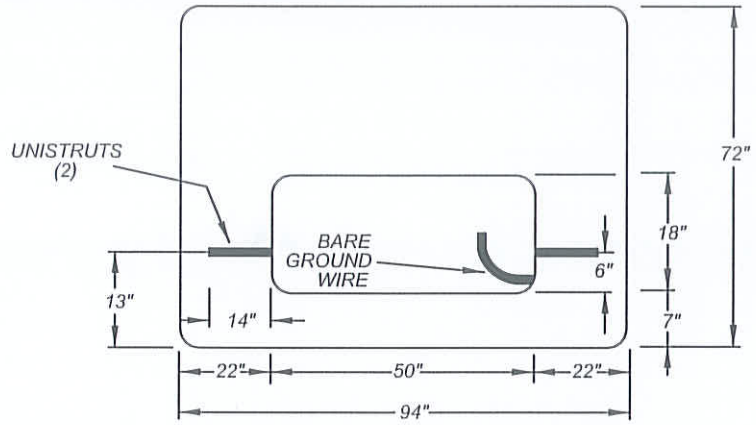
NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 8-1-19 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 8/1/19 DATE	CITY OF MORENO VALLEY FINANCIAL & MANAGEMENT SERVICES DEPARTMENT - ELECTRIC UTILITY DIVISION 66" x 72" PAD FOR 75kVA - 300kVA PAD MOUNTED TRANSFORMERS STANDARD PLAN MVEU-712-1 SHEET 1 OF 1

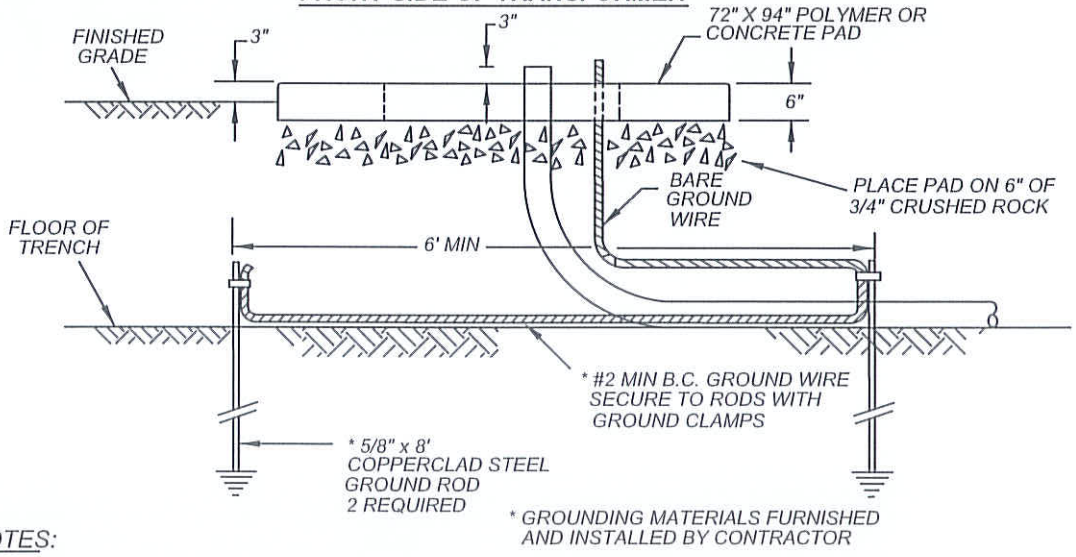
MORENO VALLEY STANDARD NO. MVEU-713-0

72" X 94" PAD FOR 75kVA-500kVA PAD MOUNTED TRANSFORMERS

BACK SIDE OF TRANSFORMER



FRONT SIDE OF TRANSFORMER



NOTES:

1. 8' UNOBSTRUCTED FLAT WORKING CLEARANCE IS REQUIRED AT FRONT OF PAD. (MEASURED FROM EDGE OF PAD)
2. 3' UNOBSTRUCTED CLEARANCE IS REQUIRED AT BACK OF PAD. (MEASURED FORM EDGE OF PAD)
3. 3' CLEARANCE IS REQUIRED ON BOTH SIDES OF PAD. (MEASURED FROM EDGE OF PAD)
4. MASTIC SEALANT REQUIRED AT JOINTS AND GAPS AROUND TRANSFORMER ENCLOSURE.
5. REFER TO STDS MVEU-722-0 & MVEU-723-0 FOR ADDITIONAL DETAILS.
6. THE THREE-PHASE TRANSFORMER SHOULD ONLY BE USED ON A PAD WHEN FOUR OR FEWER SERVCES ARE TO BE INSTALLED. A SLAB BOX SHOULD BE USED WHEN MORE THAN FOUR SERVICES WILL BE INSTALLED.

NOT TO SCALE

CITY OF MORENO VALLEY · DECEMBER 3, 1984

RECOMMENDED:
DIVISION MANAGER — DATE 1-15-14

APPROVED:
PUBLIC WORKS DIRECTOR / CITY ENGINEER — DATE 1/29/14

CITY OF MORENO VALLEY

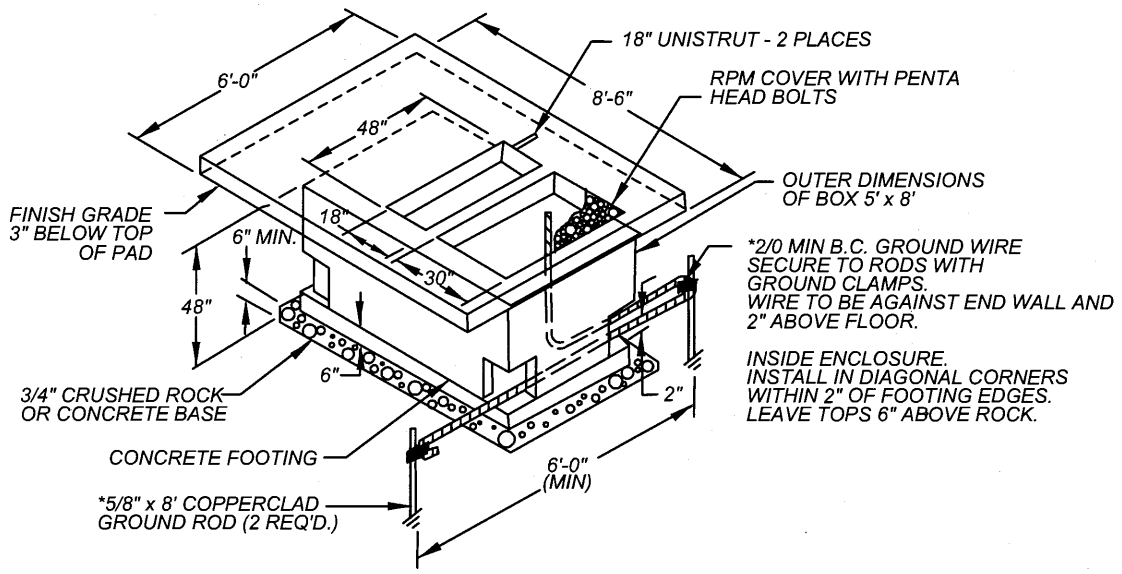
PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION

72" x 94" PAD FOR 75kVA - 500kVA PAD MOUNTED TRANSFORMERS

STANDARD PLAN
MVEU-713-0
SHEET 1 OF 1

MORENO VALLEY STANDARD No MVEU-714-0

6' x 8'-6" PAD WITH 4'-10" x 7'-10" x 4' BOX FOR 75kVA - 500kVA PAD MOUNTED TRANSFORMERS



* GROUNDING MATERIALS FURNISHED AND INSTALLED BY CONTRACTOR

NOTES:

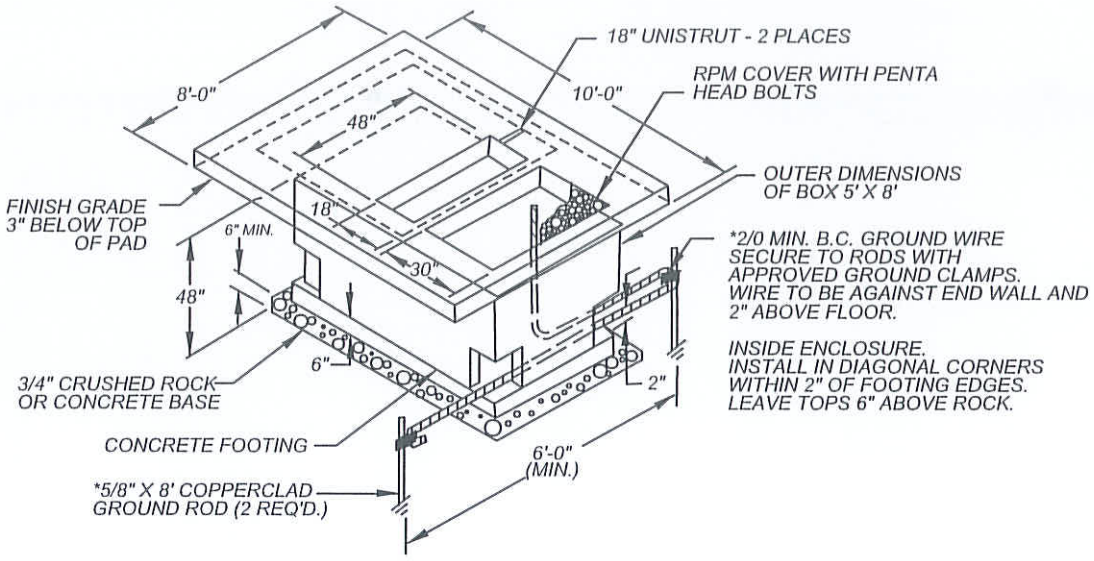
1. 8' UNOBSTRUCTED FLAT WORKING CLEARANCE IS REQUIRED AT FRONT OF PAD (MEASURED FROM EDGE OF PAD).
2. 3' UNOBSTRUCTED CLEARANCE IS REQUIRED AT BACK OF PAD (MEASURED FORM EDGE OF PAD).
3. 3' CLEARANCE IS REQUIRED ON BOTH SIDES OF PAD (MEASURED FROM EDGE OF PAD).
4. MASTIC SEALANT REQUIRED AT JOINTS AND GAPS AROUND TRANSFORMER ENCLOSURE.
5. REFER TO STDS MVEU-722 & MVEU-723 FOR ADDITIONAL DETAILS.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 12-27-16 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/20/17 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION 6' x 8'-6" PAD WITH BOX FOR 75kVA - 500kVA PAD MOUNTED TRANSFORMERS STANDARD PLAN MVEU-714-0 SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-715-0

8' x 10' PAD WITH 4'-10" x 7'-10" x 4' BOX FOR 750kVA - 1000kVA PAD MOUNTED TRANSFORMERS



* GROUNDING MATERIALS FURNISHED AND INSTALLED BY CONTRACTOR

NOTES:

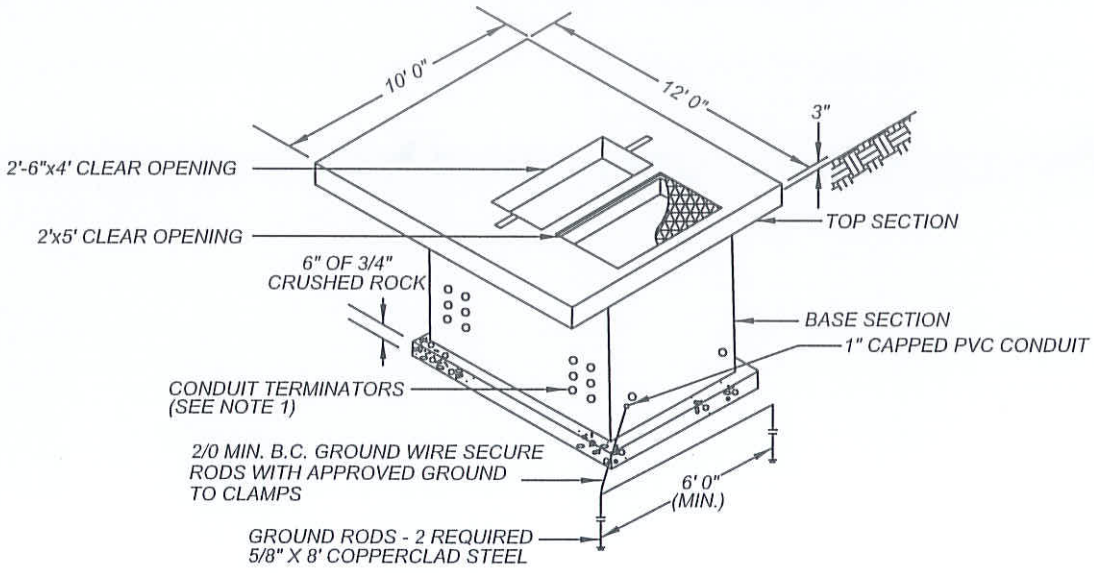
1. 8' UNOBSTRUCTED FLAT WORKING CLEARANCE IS REQUIRED AT FRONT OF PAD. (MEASURED FROM EDGE OF PAD)
2. 3' UNOBSTRUCTED CLEARANCE IS REQUIRED AT BACK OF PAD. (MEASURED FORM EDGE OF PAD)
3. 3' CLEARANCE IS REQUIRED ON BOTH SIDES OF PAD. (MEASURED FROM EDGE OF PAD)
4. MASTIC SEALANT REQUIRED AT JOINTS AND GAPS AROUND TRANSFORMER ENCLOSURE.
5. REFER TO STDS MVEU-722-0 & MVEU-723-0 FOR ADDITIONAL DETAILS.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION 8' x 10' PAD WITH BOX FOR 750kVA - 1000kVA PAD MOUNTED TRANSFORMERS
		STANDARD PLAN MVEU-715-0 SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-716-0

10' x 12' PAD WITH 5'-10" x 9'-4" x 5'-7" BOX FOR 1500kVA - 2500 kVA PAD MOUNTED TRANSFORMERS



NOTES:

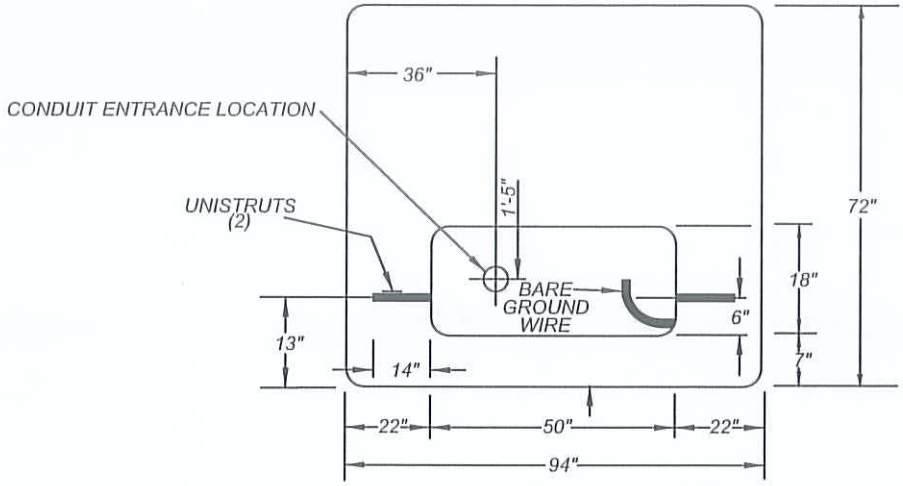
1. CONDUIT TERMINATORS TO BE LOCATED AS SHOWN. STANDARD CONDUIT ENTRANCE SHALL BE A FLATWALL DESIGN. SLIGHT VARIATIONS BY MANUFACTURERS MAY BE ALLOWED WITH CITY APPROVAL.
2. WHEN CABLE TRENCH OPENINGS ARE REQUIRED IN A SLAB BOX, THEY CAN BE SPECIAL ORDERED FROM THE CONCRETE PRECASTER.
3. CONSULT MANUFACTURER'S INSTALLATION GUIDES FOR EXCAVATION DIMENSIONS.
4. AN EIGHT FOOT MINIMUM CLEARANCE IS REQUIRED DIRECTLY IN FRONT OF TRANSFORMER FOR OPERATION.
5. GROUND RODS, CLAMPS, AND WIRE WILL BE FURNISHED BY CONTRACTOR. GROUND WIRE TO BE A MINIMUM OF 2/0 BARE COPPER. GROUND WIRE TO BE PLACED THROUGH ONE-INCH PVC CONDUIT AT EITHER END OF SLAB BOX. A MINIMUM THREE-FOOT LENGTH OF GROUND WIRE SHALL BE PLACED IN SLAB BOX.
6. MASTIC SEALANT REQUIRED AT JOINTS AND GAPS AROUND TRANSFORMER ENCLOSURE.
7. TOP SURFACE OF SLAB BOX SHALL BE SET THREE INCHES ABOVE FINISHED GRADE.
8. 8' UNOBSTRUCTED FLAT WORKING CLEARANCE IS REQUIRED AT FRONT OF PAD. (MEASURED FROM EDGE OF PAD)
9. 3' UNOBSTRUCTED CLEARANCE IS REQUIRED AT BACK OF PAD. (MEASURED FORM EDGE OF PAD)
10. 3' CLEARANCE IS REQUIRED ON BOTH SIDES OF PAD. (MEASURED FROM EDGE OF PAD)
11. REFER TO STDS MVEU-722-0 & MVEU-723-0 FOR ADDITIONAL DETAILS.

NOT TO SCALE

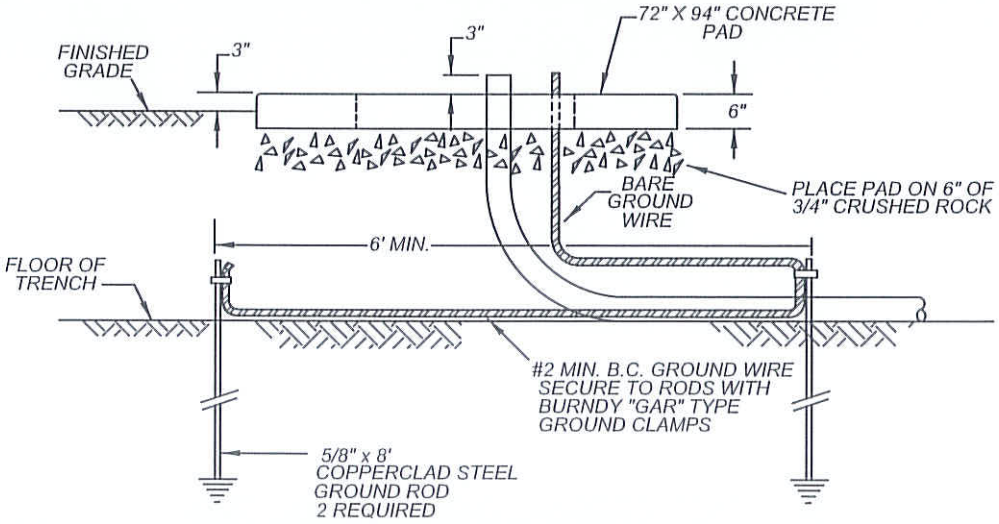
CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION 10' x 12' PAD WITH BOX FOR 1500kVA - 2500kVA PAD MOUNTED TRANSFORMERS	STANDARD PLAN MVEU-716-0 SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-717-0

72" X 94" PAD FOR PAD MOUNTED CAPACITORS



BACK SIDE OF CAPACITOR



FRONT SIDE OF CAPACITOR

(*) - AS MEASURED FROM EDGE OF PAD

NOTES:

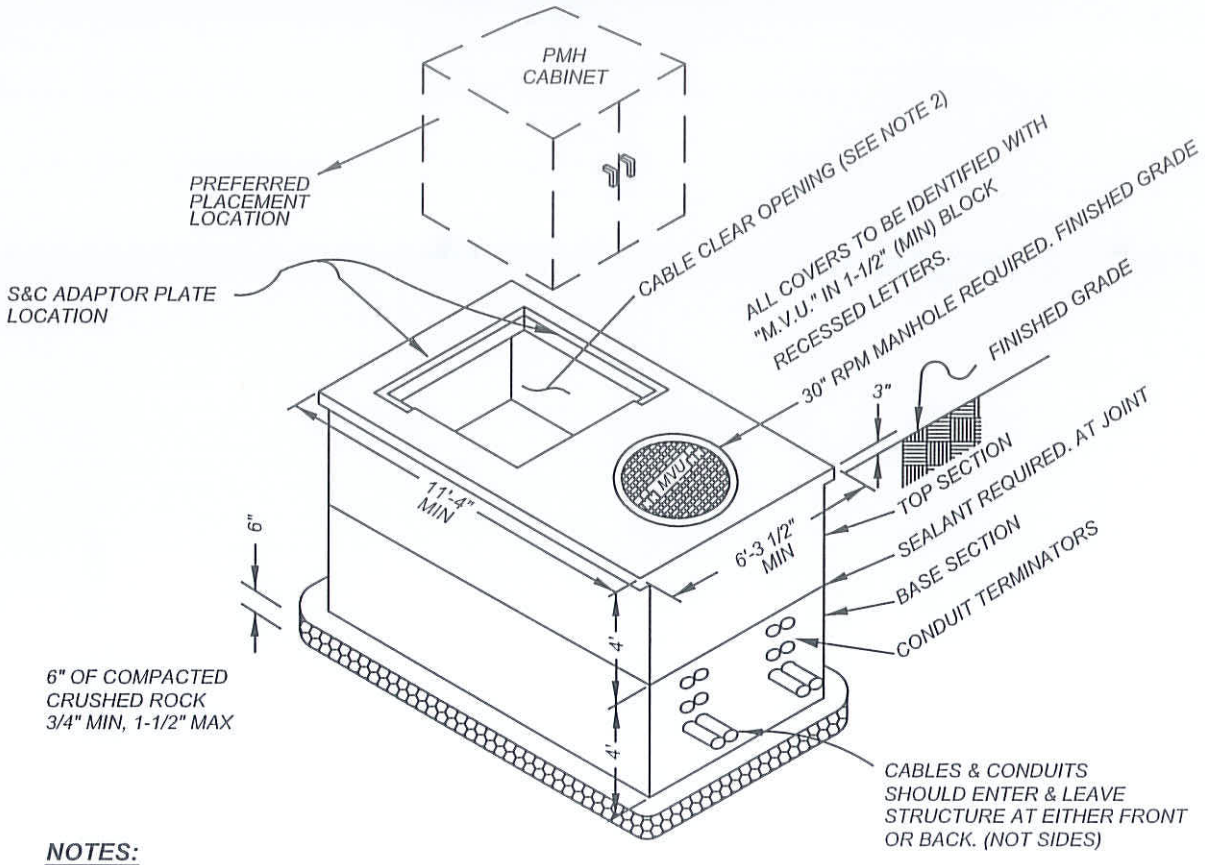
1. 8' UNOBSTRUCTED FLAT WORKING CLEARANCE (*) IS REQUIRED AT FRONT OF PAD.
2. 8' UNOBSTRUCTED FLAT WORKING CLEARANCE (*) IS REQUIRED AT BACK OF PAD.
3. 3' CLEARANCE (*) IS REQUIRED ON BOTH SIDES OF PAD.
4. REFER TO STDS MVEU-722-0 & MVEU-723-0 FOR ADDITIONAL DETAILS.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION 72" X 94" PAD FOR PAD-MOUNTED CAPACITORS	STANDARD PLAN MVEU-717-0 SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-718-0

PMH TUB-STYLE CONCRETE ENCLOSURE
5' x 10'-6" x 7'
(PMH-6 THRU PMH-14)



NOTES:

1. TOP & BOTTOM SECTIONS PROVIDED WITH GROUNDING INSERTS.
2. CABLE CLEAR OPENING SHALL BE COVERED WITH AN ELECTRICAL-APPROVED COVER AT THE TIME OF STRUCTURE PLACEMENT.
3. KEEP BARRIER PLATES BANDED AND PLACE IN BOTTOM OF BASE SECTION.
4. BACKFILL AROUND THE STRUCTURE SHALL BE WITH A MINIMUM OF ONE SACK PER YARD SAND CEMENT SLURRY TO WITHIN ONE FOOT OF FINISHED GRADE. THE SURFACE ELEVATION OF THE SLURRY SHALL NOT VARY MORE THAN 1'-0" AROUND THE PERIMETER OF THE STRUCTURE AS IT IS BEING PLACED.
5. 8' UNOBSTRUCTED FLAT WORKING CLEARANCE IS REQUIRED AT DOOR SIDES OF CABINET. (MEASURED FROM EDGE OF PAD)
6. 3' UNOBSTRUCTED CLEARANCE IS REQUIRED AT NON-DOOR SIDES OF CABINET. (MEASURED FROM EDGE OF PAD)
7. MINIMUM EXCAVATION PER MANUFACTURER'S RECOMMENDATIONS.
8. REFER TO STDS MVEU-722-0 & MVEU-723-0 FOR ADDITIONAL DETAILS.
9. ENCLOSURE TO BE INSTALLED WITH PRIMARY GROUND ASSEMBLY.
10. ENCLOSURE TO BE INSTALLED WITH CABLE RACK ASSEMBLY.
11. PRIMARY GROUND HALO TO BE #4 /O BC AND ATTACHED TO ALL GROUND INSERTS.

NOT TO SCALE

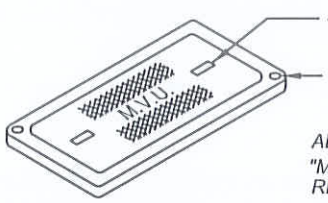
CITY OF MORENO VALLEY · DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **PAD MOUNTED SWITCH ENCLOSURE DETAIL 5' x 10'-6" x 7'**	STANDARD PLAN **MVEU-718-0** SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-719-0

17" x 30" x 24"

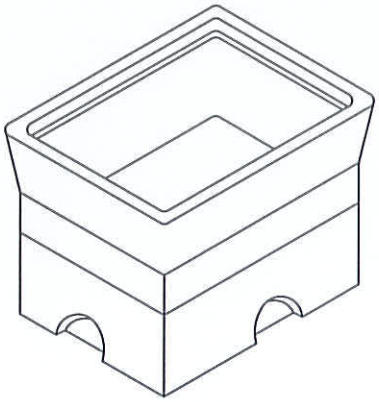
SERVICE CONNECTION PULL BOX

(FOR RESIDENTIAL ELECTRICAL SYSTEMS)

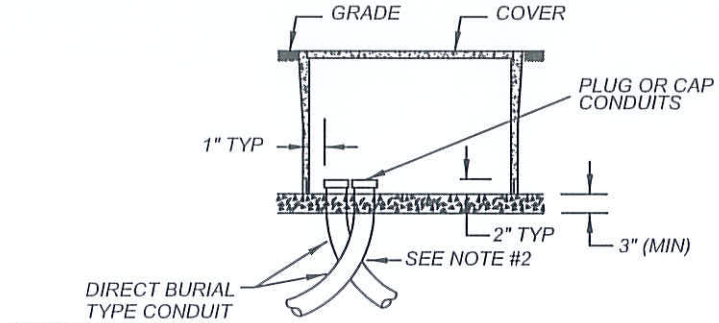


ALL COVERS TO BE IDENTIFIED WITH "M.V.U." IN 1½" (MIN) BLOCK RECESSED LETTERS.

TYPICAL COVER
(CONCRETE OR PLASTIC)

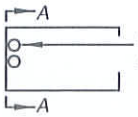


TYPICAL ASSEMBLY WITHOUT COVER
(CONCRETE OR PLASTIC)



SECTION A-A

ALL CONDUITS



CONDUIT LOCATIONS

NOTES:

1. RADIUS ANGLE MAY BE REDUCED TO LESS THAN 90° PROVIDING THE PROJECTED CENTER LINE OF THE CONDUIT CLEARS HANDHOLE OPENING.
2. TWO HOLD DOWN DEVICES TO BE SUPPLIED WITH EACH HANDHOLE.

NOT TO SCALE

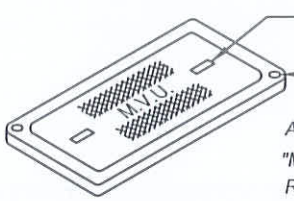
CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION	STANDARD PLAN MVEU-719-0 SHEET 1 OF 1
		17" x 30" x 24" PULL BOX FOR SERVICE CONNECTION	

MORENO VALLEY STANDARD NO. MVEU-720-0

10.5" x 17" x 24"

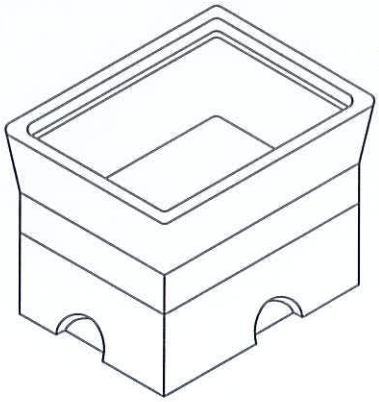
STREET LIGHT CONNECTION PULL BOX

(STREET LIGHT SYSTEM ONLY)

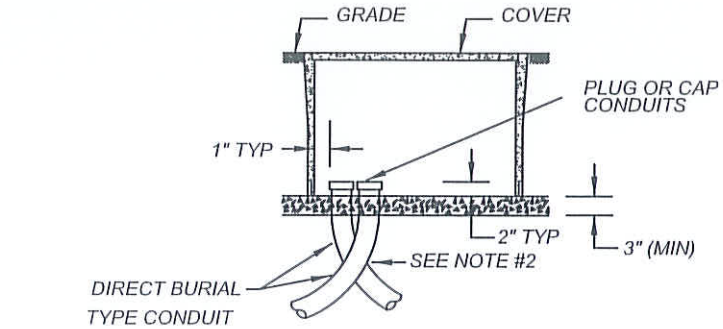


ALL COVERS TO BE IDENTIFIED WITH "M.V.U." IN 1 1/2" (MIN) BLOCK RECESSED LETTERS.

TYPICAL COVER
(PLASTIC OR CONCRETE IF IN SIDEWALK)

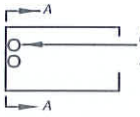


TYPICAL ASSEMBLY WITHOUT COVER
(PLASTIC OR CONCRETE IF IN SIDEWALK)



SECTION A-A

ALL CONDUITS



CONDUIT LOCATIONS

NOTES:

1. RADIUS ANGLE MAY BE REDUCED TO LESS THAN 90° PROVIDING THE PROJECTED CENTER LINE OF THE CONDUIT CLEARS HANDHOLE OPENING.
2. TWO HOLD DOWN DEVICES TO BE SUPPLIED WITH EACH HANDHOLE.

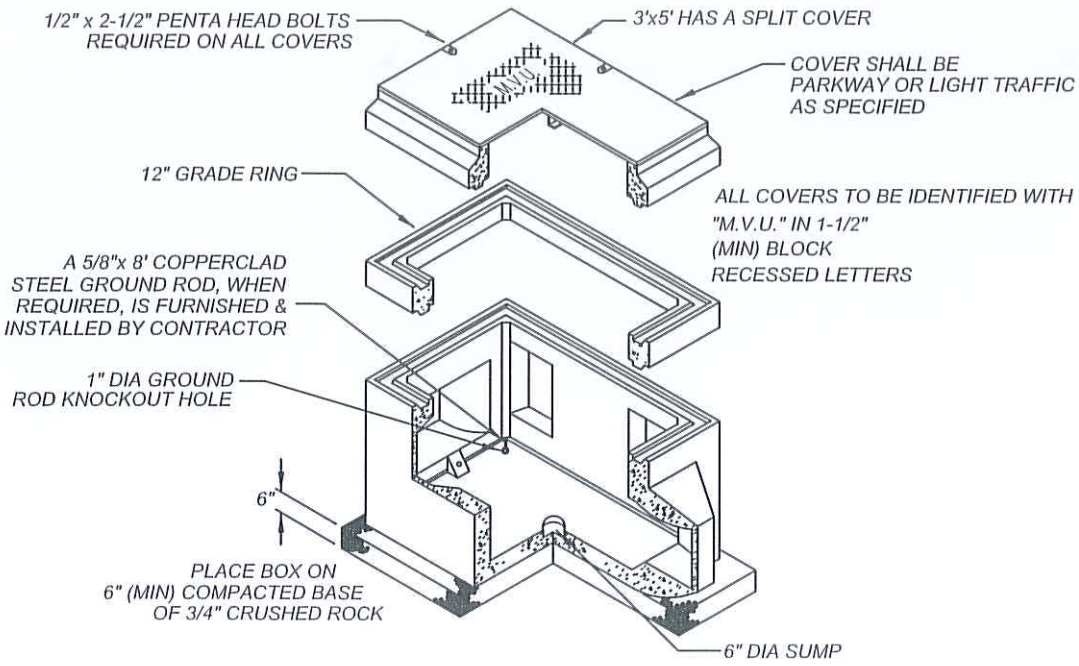
NOT TO SCALE

CITY OF MORENO VALLEY · DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **10.5" x 17" x 24" PULL BOX FOR STREET LIGHT CONNECTION**	STANDARD PLAN **MVEU-720-0** SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-721-0

PRECAST CONCRETE PARKWAY ENCLOSURE

2' x 3' x 5' & 3' x 5' x 5'



* MIN EXCAVATION 36" x 72" x DEPTH OF BOX

NOTES:

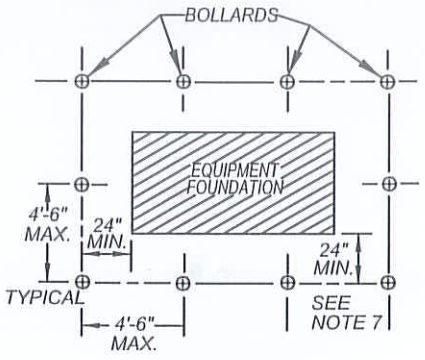
1. USE A 2'x3'x5' FOR UP TO THREE (3) STRAIGHT SPLICES.
2. USE A 3'x5'x5' PULL BOX FOR UP TO THREE (3) JBAR SPLICES.

NOT TO SCALE

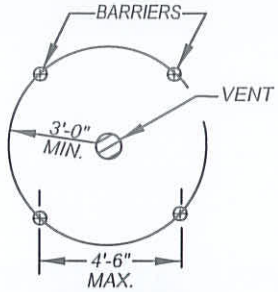
CITY OF MORENO VALLEY DECEMBER 3,1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION PRECAST CONCRETE PARKWAY ENCLOSURE 2' x 3' x 5' AND 3' x 5' x 5'	STANDARD PLAN MVEU-721-0 SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-722-0

PROTECTIVE BARRIERS FOR EQUIPMENT AND STRUCTURES SUBJECT TO TRAFFIC LOCATIONS



PLAN VIEW
EQUIPMENT FOUNDATION

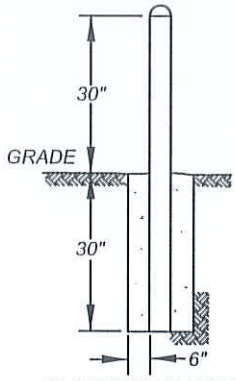


PLAN VIEW
VAULT VENT PIPE

BARRIER

TO BE ONE OF THE FOLLOWING:

1) 4" GALV. STEEL PIPE (1/4" MIN. WALL) FILLED WITH CONCRETE
2) RAILROAD RAIL (90 LB. MIN.), or 51 14 75 AMERICAN STD. BEAM (5"x3"x1/2")
3) 8"x8" REINF. CONCRETE
4) SPECIAL BARRIERS BY PRIOR CITY APPROVAL



ELEVATION VIEW
BOLLARD DETAIL

NOTES:

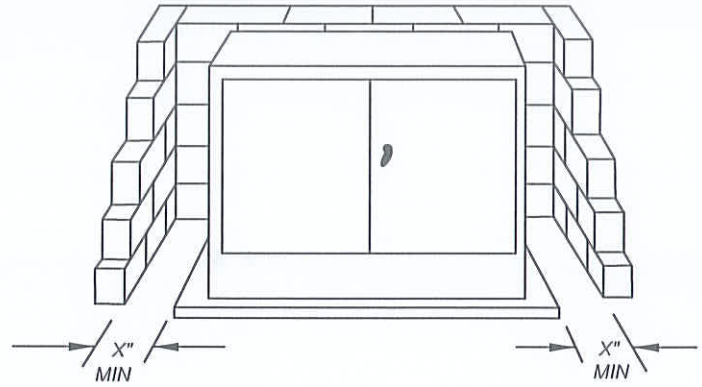
1. STRUCTURES WILL NORMALLY BE INSTALLED ONLY IN NON-TRAFFIC AREAS. BARRIERS TO BE USED WHEN EQUIPMENT IS LESS THAN 5' FROM TRAFFIC LANE (WITH CURB), 10' FROM TRAFFIC LANE (WITHOUT CURB), OR IN PARKING LOTS WHERE WITHIN 5' OF ANY VEHICULAR TRAFFIC AREA.
2. TOP OF BARRIERS TO BE SMOOTH CUT AND TOP EDGES TO BE ROUNDED.
3. ONE BARRIER TO BE REMOVABLE WHEN OVERHEAD OBSTACLES PREVENT EQUIPMENT REMOVAL BY CRANE.
4. ADEQUATE CLEARANCE MUST BE PROVIDED FOR DOORS, COOLING COILS, ETC.
5. BARRIERS, AS SHOWN, INDICATE TYPICAL REQUIREMENTS. FIELD CONDITIONS WILL NECESSITATE CHANGES FOR ADEQUATE EQUIPMENT PROTECTION. APPROVAL IN THE FIELD FROM THE UNDERGROUND INSPECTOR IS REQUIRED FOR ALL BARRICADE INSTALLATIONS.
6. WHEN SPECIFIED ON WORKING DRAWING, A 6" (MINIMUM HEIGHT) CURB MAY BE INSTALLED IN PLACE OF BARRIERS. THIS CURB MUST BE AT LEAST 6" THICK AND ITS FRONT FACE LOCATED 60" MINIMUM (OR AS SPECIFIED ON DRAWING) FROM THE EQUIPMENT FOUNDATION.
7. INCREASE TO 44" MINIMUM AT FRONT OF PADMOUNT 3 Ø TRANSFORMERS AND CAPACITORS, AND 36" MINIMUM AT BACK OF CAPACITORS (DOOR SIDE ONLY), WHEN A 72" x 94" PAD IS BEING INSTALLED.

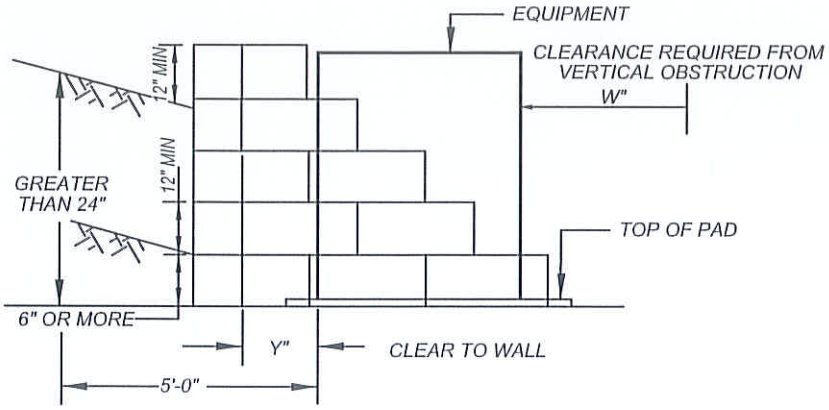
NOT TO SCALE

CITY OF MORENO VALLEY · DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 1-15-14 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION	
	APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/29/14 DATE	PROTECTIVE BARRIERS FOR EQUIPMENT AND STRUCTURES SUBJECT TO TRAFFIC LOCATIONS	STANDARD PLAN MVEU-722-0 SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-723-0

RETAINING WALLS FOR PAD MOUNTED SWITCHES & TRANSFORMERS





EQUIPMENT TYPE MINIMUM CLEARANCES	"W"	"X"	"Y"
TRANSFORMERS FRONT DOOR WORKING CLEARANCE	72"	---	---
TRANSFORMERS SIDE(S) CLEARANCE	---	18"	---
TRANSFORMERS REAR CLEARANCE	---	---	12"
SWITCHGEAR FRONT DOOR WORKING CLEARANCE	72"	---	---
SWITCHGEAR REAR DOORS WORKING CLEARANCE	---	---	72"
SWITCHGEAR SIDE(S) WORKING CLEARANCE	---	60"	---

NOTES:

1. RETAINING WALLS ARE REQUIRED WHERE A SLOPING GRADE RISES 24" OR MORE AT A HORIZONTAL DISTANCE OF 5' OR LESS FROM THE EDGE OF PAD OR ENCLOSURE.
2. RETAINING WALLS ARE ALSO REQUIRED WHENEVER THE GRADE RISES 6" ABOVE THE TOP OF PAD (SEE DRAWING DETAILS).
3. RETAINING WALLS MUST BE APPROVED BY BUILDING DEPARTMENT AND REQUIRES A SEPARATE PERMIT(S) . SEE STANDARD MVGF-650A-0 AND MVGF-650B-0.

NOT TO SCALE

CITY OF MORENO VALLEY · DECEMBER 3, 1984

RECOMMENDED:
DIVISION MANAGER — DATE 1-15-14

APPROVED:
PUBLIC WORKS DIRECTOR / CITY ENGINEER — DATE 1/29/14

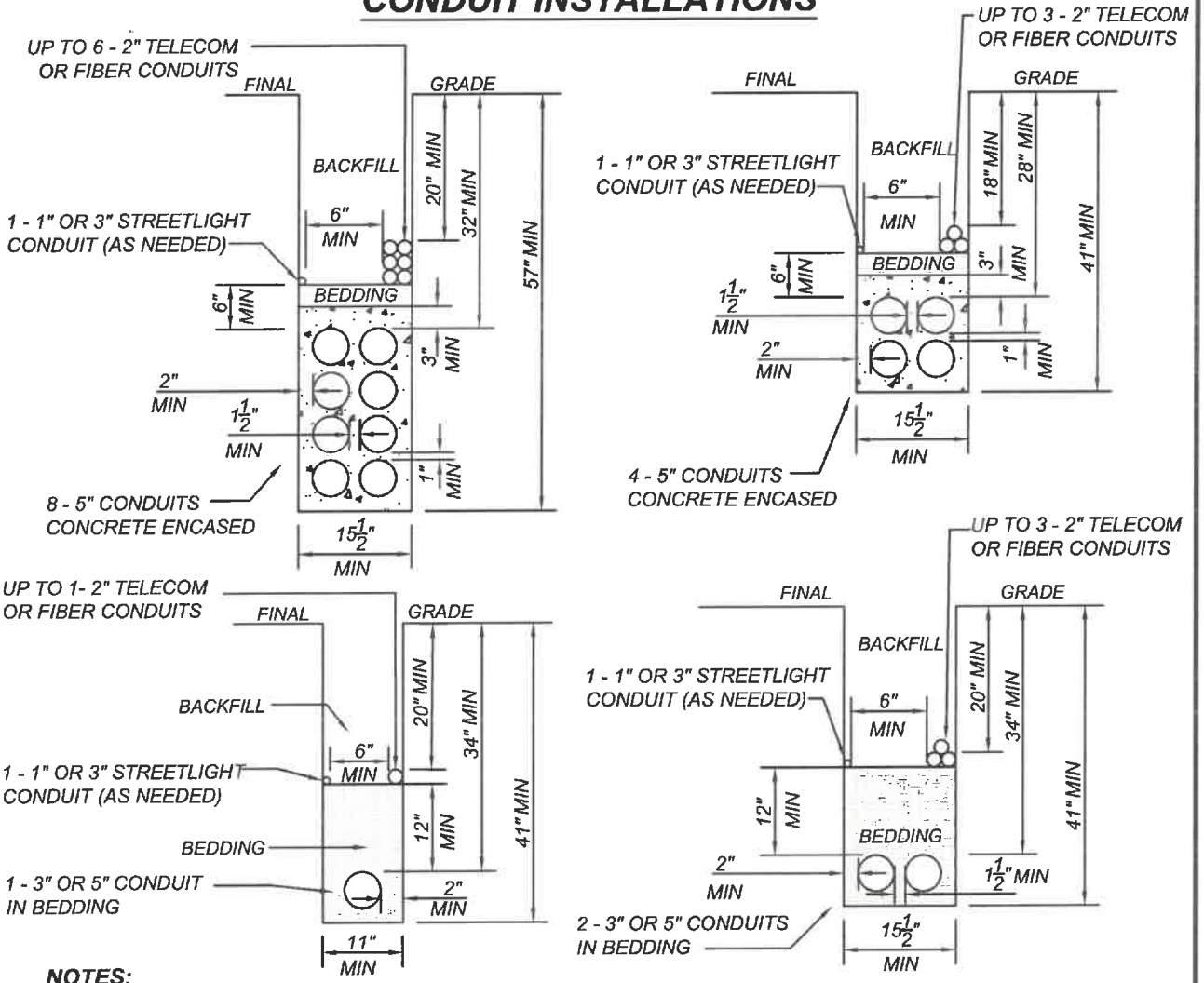
CITY OF MORENO VALLEY
PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION

RETAINING WALLS FOR PAD-MOUNTED SWITCHES & TRANSFORMERS

STANDARD PLAN
MVEU-723-0
SHEET 1 OF 1

MORENO VALLEY STANDARD No MVEU-724A

TRENCH DETAILS FOR CONDUIT INSTALLATIONS



NOTES:

1.) BEDDING MATERIAL SHALL BE CLEAN SAND OR PEA GRAVEL. OTHERWISE, NATIVE MATERIALS MAY BE USED PROVIDED THEY MEET PUBLIC WORKS CONSTRUCTION (GREEN BOOK) STANDARDS PER SUBSECTION 306.1.2.1 AND MUST HAVE A SAND EQUIVALENT OF NOT LESS THAN 30 OR HAVING A COEFFICIENT OF PERMEABILITY GREATER THAN 1.4 INCHES/HR.

2.) ALL CONDUITS AND CONDUIT ELBOWS SHALL BE SCH-40, SCH-80, OR FIBERGLASS.

3.) FOR CONDUIT INSTALLATION IN A BORE, SEE STD PLANS MVEU-727A & MVEU-727B.

4.) FOR CONDUIT INSTALLATION IN EXISTING ROADWAYS, SEE STD PLANS MVSI-132A, MVSI-132B, & MVSI-132C FOR SURFACE RESTORATION AND BACKFILL REQUIREMENTS.

5.) CONCRETE SHALL BE TWO SACK ENCASEMENT

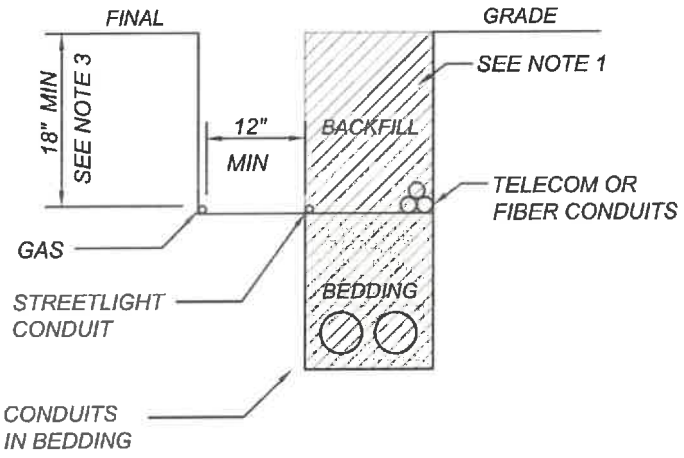
6.) ORANGE INSULATED COPPER CLAD STEEL TRACER WIRE PER KRISTECH SPECIFICATIONS SHEET, OR EQUAL. TRACER WIRE TO BE INSTALLED 2" ABOVE COMMUNICATION CONDUIT PER "THE COMPLETE UTILITY LOCATING SYSTEM SPECIFICATIONS FOR TELECOMMUNICATIONS" BY COPPERHEAD INDUSTRIES, OR EQUIVALENT.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER — DATE 6-21-23 APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER — DATE 6/21/23	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **TRENCH DETAILS FOR CONDUIT INSTALLATIONS** STANDARD PLAN **MVEU-724A-2** SHEET 1 OF 2

MORENO VALLEY STANDARD No MVEU-724B

TRENCH DETAILS FOR CONDUIT INSTALLATIONS JOINT WITH GAS



NOTES:

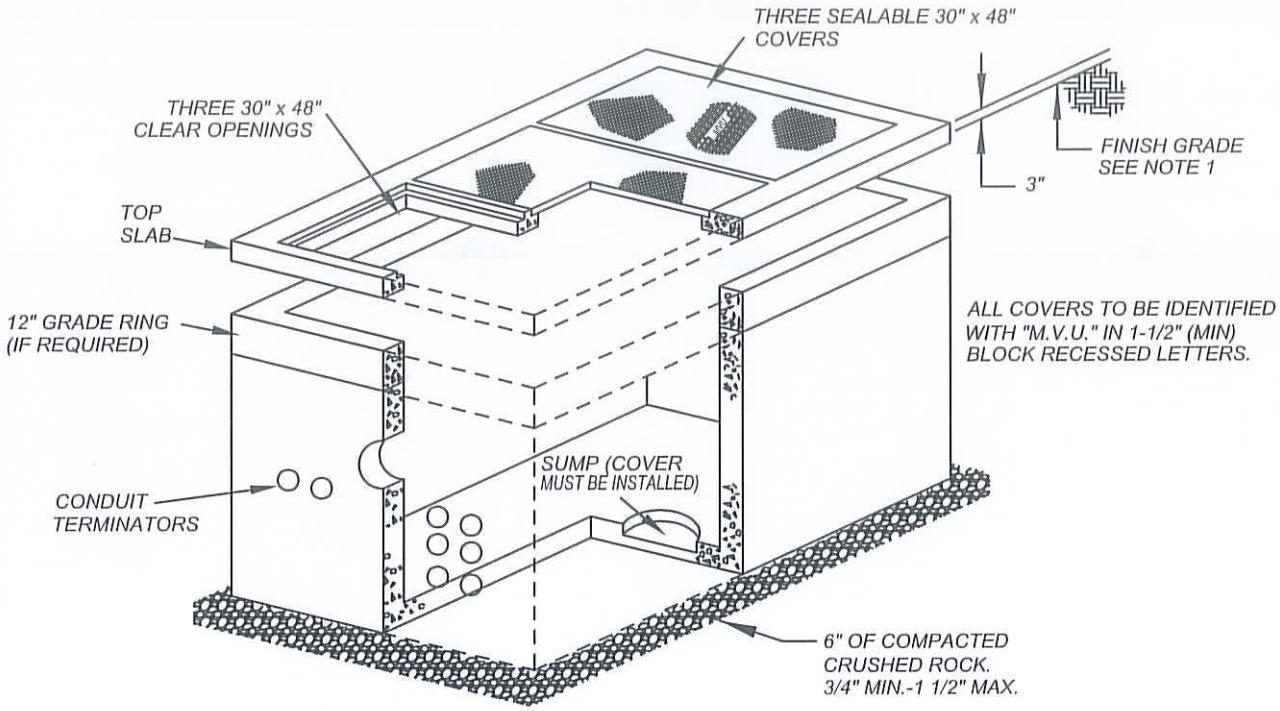
1.) SEE MVEU-724A FOR MINIMUM DEPTHS AND CLEARANCES FOR COMMUNICATION AND POWER CONDUIT CONFIGURATIONS.
2.) GAS LINES IN THE JOINT TRENCH SHALL BE STEPPED OUT HORIZONTALLY AT LEAST 12" FROM COMMUNICATION OR POWER CONDUITS.
3.) THE MINIMUM DEPTH OF THE GAS LINE SHALL BE AT LEAST 18" FROM FINAL GRADE, OR AS DETERMINED FROM THE LOCAL GAS PURVEYOR'S STANDARDS, WHICHEVER IS DEEPER.
4.) BEDDING MATERIAL SHALL BE CLEAN SAND OR PEA GRAVEL. OTHERWISE, NATIVE MATERIALS MAY BE USED PROVIDED THEY MEET PUBLIC WORKS CONSTRUCTION (GREEN BOOK) STANDARDS PER SUBSECTION 306.1.2.1 AND MUST HAVE A SAND EQUIVALENT OF NOT LESS THAN 30 OR HAVING A COEFFICIENT OF PERMEABILITY GREATER THAN 1.4 INCHES/HR.
5.) CONDUITS AND CONDUIT ELBOWS SHALL BE SCH-40, SCH-80, OR FIBERGLASS.
6.) FOR CONDUIT INSTALLATION IN A BORE, SEE STD PLANS MVEU-727A & MVEU-727B.
7.) FOR CONDUIT INSTALLATION IN EXISTING ROADWAYS, SEE STD PLANS MVSI-132A, MVSI-132B, & MVSI-132C FOR SURFACE RESTORATION AND BACKFILL REQUIREMENTS.
8.) CONCRETE SHALL BE TWO SACK ENCASEMENT.
9.) ORANGE INSULATED COPPER CLAD STEEL TRACER WIRE PER KRISTECH SPECIFICATIONS SHEET, OR EQUAL. TRACER WIRE TO BE INSTALLED 2" ABOVE COMMUNICATION CONDUIT PER "THE COMPLETE UTILITY LOCATING SYSTEM SPECIFICATIONS FOR TELECOMMUNICATIONS" BY COPPERHEAD INDUSTRIES, OR EQUIVALENT.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3,1984	RECOMMENDED: DIVISION MANAGER — DATE 6-21-23	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION	
	APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER — DATE 6/21/23	TRENCH DETAILS FOR CONDUIT INSTALLATIONS JOINT WITH GAS	STANDARD PLAN MVEU-724B-2 SHEET 2 OF 2

MORENO VALLEY STANDARD NO. MVEU-725-0

PRECAST SURFACE OPERABLE PARKWAY ENCLOSURE
(5' x 8'-6" x 5')



EXCAVATION SIZE:

CONSULT MANUFACTURERS' GUIDES FOR EXACT EXCAVATION DIMENSION

NOTES:

1.) TOP SURFACE OF ENCLOSURE SLAB SHALL BE SET 3" ABOVE FINISH GRADE WHEN INSTALLED IN A LANDSCAPED AREA.

2.) ENCLOSURE SHALL BE FURNISHED WITH 1/2" THREADED BRONZE GROUNDING INSERTS.

3.) INSIDE WALLS ARE TO BE PAINTED WHITE.

4.) ENCLOSURE PROVIDED WITH THREE HOT-DIPPED GALVANIZED 30"x 48" STEEL PULL BOX FRAMES. A ONE PIECE EPDM GASKET SHALL BE PERMANENTLY GLUED IN PLACE TO EACH FRAME.

5.) THREE 30"x 48" POLYMER CONCRETE PARKWAY COVERS SHALL BE FLAT AND SMOOTH WITH NO SURFACE POCKETS FOR A MINIMUM OF 2" BACK FROM THE OUTER PERIMETER OF COVER.

6.) ENCLOSURE TO BE INSTALLED WITH PRIMARY GROUND ASSEMBLY.

7.) 13" DIA x 12" DIA SUMP x 4-1/2" DEEP WITH COVER, LOCATE AS FOLLOWS: BOTTOM SECTION (1) CORE MTD.

8.) ENCLOSURE TO BE INSTALLED WITH CABLE RACK ASSEMBLY.

9.) PRIMARY GROUND HALO TO BE #4 /O BC AND ATTACHED TO ALL GROUND INSERTS.

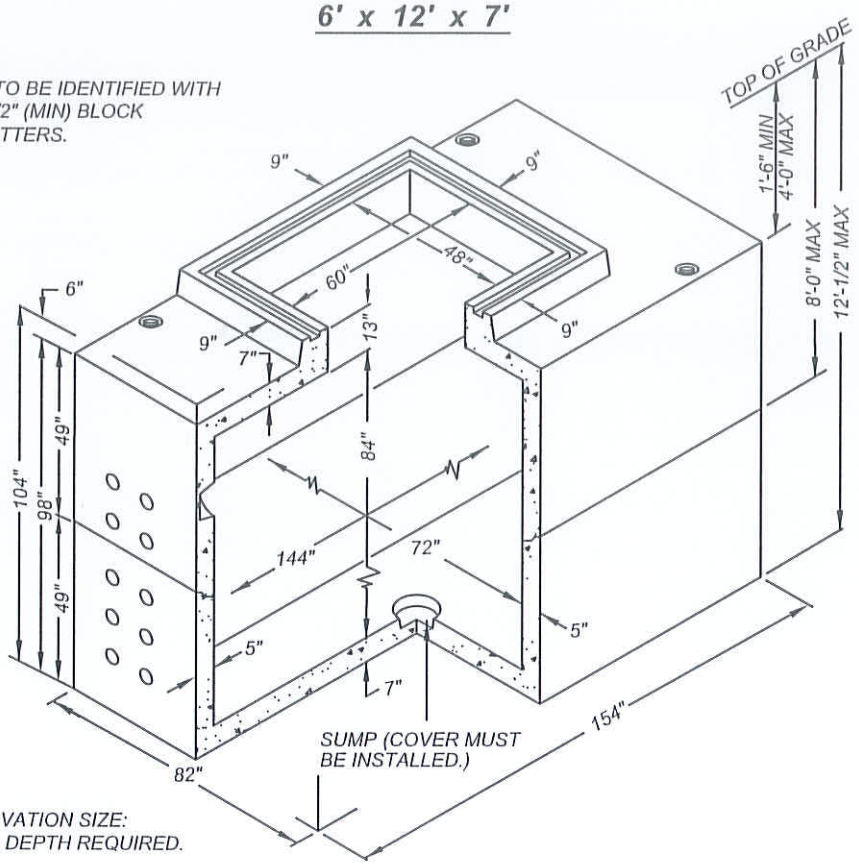
NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER DATE 1-22-14	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION
	APPROVED: PUBLIC WORKS DIRECTOR/ CITY ENGINEER DATE 1/29/14	SURFACE OPERABLE ENCLOSURE 5' x 8'-6" x 5'
		STANDARD PLAN MVEU-725-0 SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-726-0

PRECAST VAULT ENCLOSURE
6' x 12' x 7'

ALL COVERS TO BE IDENTIFIED WITH "M.V.U." IN 1-1/2" (MIN) BLOCK RECESSED LETTERS.



MINIMUM EXCAVATION SIZE:
7'-10" x 13'-10" x DEPTH REQUIRED.

NOTES:

1.) VAULT DESIGNED IN ACCORDANCE WITH AASHTO H-20-44 TRAFFIC BRIDGE LOADING USING 5,500 PSI COMPRESSIVE STRENGTH CONCRETE AND 60,000 PSI YIELD STRENGTH ASTM A-706 STEEL REINFORCEMENT.

2.) VAULT TO BE PLACED ON A MIN 6" BASE OF CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.

3.) LIMIT OF COVER OVER ROOF SECTION IS 1'-6" TO 4'-0".

4.) LIMIT OF EMBEDMENT OF BOTTOM SECTION IS 10'-8" TO 13'-2".

5.) ALL WALLS AND CEILINGS TO BE PAINTED WITH WHITE PAINT.

6.) STEEL LADDER TO BE SUPPLIED WITH EACH VAULT.

7.) ADJUST TO GRADE WITH GRADE RINGS.

8.) ENCLOSURE TO BE INSTALLED WITH PRIMARY GROUND ASSEMBLY.

9.) 13" DIA x 12" DIA SUMP x 4-1/2" DEEP WITH COVER, LOCATE AS FOLLOWS: BOTTOM OF SECTION (1) CORE MTD.

10.) ENCLOSURE TO BE INSTALLED WITH CABLE RACK ASSEMBLY

11.) PRIMARY GROUND HALO TO BE #4 /O BC AND ATTACHED TO ALL GROUND INSERTS.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984

RECOMMENDED:
DIVISION MANAGER — DATE 1-15-14

APPROVED:
PUBLIC WORKS DIRECTOR / CITY ENGINEER — DATE 1/29/14

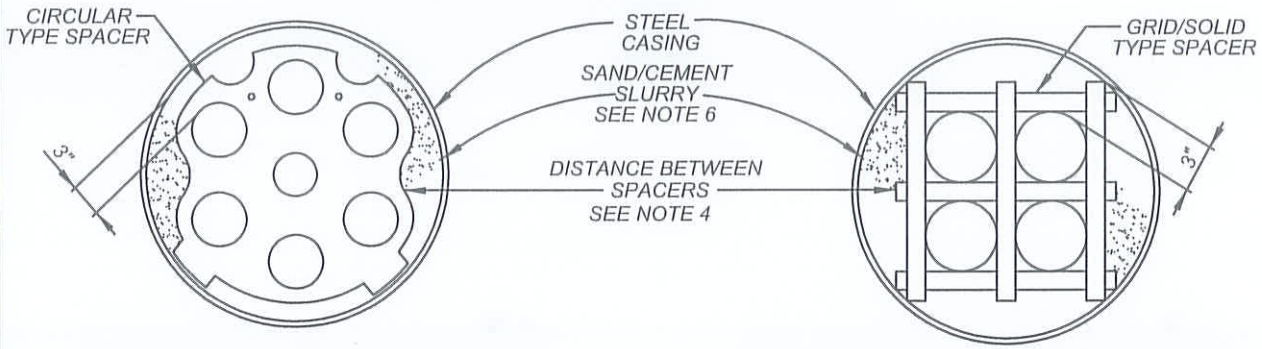
CITY OF MORENO VALLEY
PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION

VAULT
6' x 12' x 7'

STANDARD PLAN
MVEU-726-0
SHEET 1 OF 1

MORENO VALLEY STANDARD NO. MVEU-727A-0

CONDUIT BANK REQUIREMENTS INSTALLATION IN A BORE



METHOD A CIRCULAR SPACER FOR RIGID SCH. 40 PVC CONDUIT

METHOD B GRID/SOLID SPACER FOR RIGID SCH. 40 PVC CONDUIT

CONDUIT BANK REQUIREMENT- INSTALLATION IN A BORE

METHOD	NO. OF 5" CONDUITS	RECOMMENDED CASING SIZE	METHOD	NO. OF 5" CONDUITS	RECOMMENDED CASING SIZE
-	-	-	B	4	20" OD
A	6	22" OD	B	6	28" OD
A	8	28" OD	B	8	32" OD
-	-	-	B	10	38" OD
-	-	-	B	12	44" OD

NOTES:

1.) INSTALLATION SHALL BE MADE BY MACHINE BORING OR BY JACKING. SLUICING AND JETTING WITH WATER IS NOT PERMITTED. A LIMITED USE OF WATER FOR LUBRICATION OF DRILLS MAY BE PERMITTED, HOWEVER, BY SPECIAL ARRANGEMENT WITH THE CITY ENGINEER.

2.) A NEW STEEL CASING WILL NORMALLY BE USED. USED CASING, WHICH SHOWS LITTLE OR NO DETERIORATION, MAY BE USED IF JUDGED SATISFACTORY BY THE CITY ENGINEER. THE MINIMUM ALLOWABLE THICKNESS IS 1/4". USE A 1/4" WALL THICKNESS IF UNDER 30" IN DIAMETER; A 3/8" WALL THICKNESS FOR DIAMETERS UP TO 48" AND A 1/2" THICKNESS FOR DIAMETERS 42" AND GREATER. THE TYPE OF CONSTRUCTION SHOULD GOVERN THE WALL THICKNESS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SUFFICIENCY OF THE CASING DURING CONSTRUCTION, AND ALSO THE METHOD OF INSTALLATION.

3.) CONDUITS INSTALLED IN THE CASING AS IN "METHOD A" OR "METHOD B" ABOVE SHALL BE RIGID SCH. 40 PVC.

4.) SPACERS SHALL BE OF THE TYPE AND DESIGN AS APPROVED BY THE CITY ENGINEER. SPACERS SHALL BE INSTALLED AND MAINTAINED IN A VERTICAL POSITION, AND THE DISTANCE BETWEEN SPACERS SHALL BE LIMITED TO A MAXIMUM OF FIVE FEET.

5.) THE INSTALLATION OF FOREIGN UTILITIES IN BORE CASINGS IS NOT PERMITTED.

6.) CONDUITS SHALL MAINTAIN THE SAME POSITION ENTERING AND LEAVING THE CASING. AFTER THE CONDUITS ARE IN PLACE, A SAND/ CEMENT SLURRY (MINIMUM OF ONE SACK OF CEMENT PER CUBIC YARD) AND VIBRATORS SHALL BE USED TO MINIMIZE VOIDS.

7.) WHEN SPECIFIED ON WORKING DRAWING, CONTRACTOR SHALL INSTALL INSULATED COPPER NEUTRAL WIRE IN CASING PER SEPARATE PLAN.

8.) THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, MINING AND TUNNELING UNIT SHALL BE NOTIFIED BY THE CONTRACTOR AND AN UNDERGROUND CLASSIFICATION PERMIT BE ISSUED PRIOR TO THE INSTALLATION OF ANY BORE CASING 30" IN DIAMETER OR LARGER.

NOT TO SCALE

CITY OF MORENO VALLEY — DECEMBER 3, 1984

RECOMMENDED: _____ 1-22-14
DIVISION MANAGER — DATE

APPROVED: _____ 1/29/14
PUBLIC WORKS DIRECTOR / CITY ENGINEER — DATE

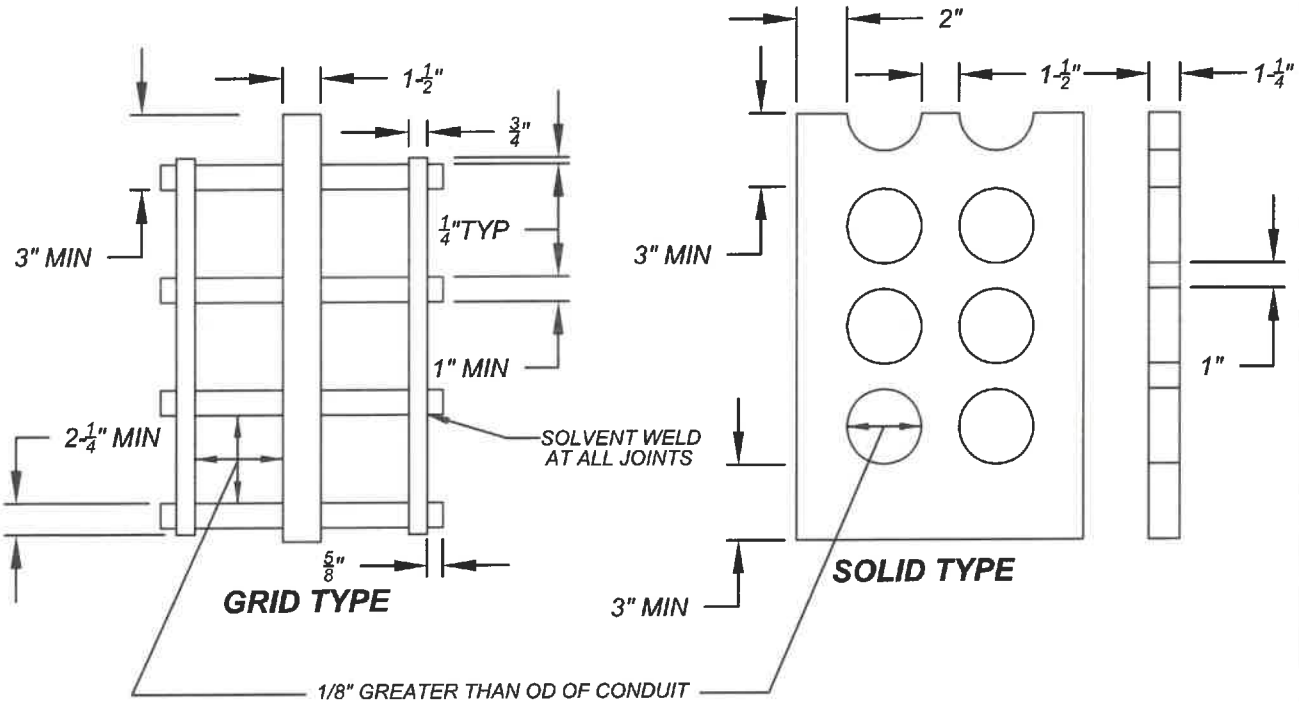
CITY OF MORENO VALLEY
PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION

CONDUIT BANK REQUIREMENTS INSTALLATION IN A BORE

STANDARD PLAN
MVEU-727A-0

MORENO VALLEY STANDARD No MVEU-727B-0

CONDUIT SPACERS METHOD B



NOTES:

1.) MATERIAL:
   A. GRID-TYPE SPACER TO BE FABRICATED TO PLASTIC CONDUIT WITH MINIMUM WALL THICKNESS OF 0.09 INCHES.
   B. SOLID-TYPE SPACER TO BE FORMED OF POLYURETHANE WITH A MINIMUM DENSITY OF 4lb/cf.
2.) TIERS MAY BE ADDED OR DELETED AS REQUIRED. CLEARANCE AS SHOWN MUST BE MAINTAINED BETWEEN CONDUITS.
3.) FOR FULL ENCASEMENT IN A TRENCH, A THREE-INCH MINIMUM CLEARANCE BETWEEN THE TRENCH BOTTOM AND THE LOWER TIER OF DUCTS SHALL BE MAINTAINED. TO MEET THIS REQUIREMENT, THE GRID-TYPE SPACER MUST BE SET UPON A BASE OF SUCH THICKNESS TO PROVIDE THREE INCHES OF CLEARANCE. THE SPACERS SHALL BE ANCHORED TO THE GROUND TO AVOID FLOATING DURING PLACEMENT OF SAND/CEMENT SLURRY.
4.) FOR TRENCH DETAILS FOR CONDUIT INSTALLATIONS, SEE STD PLAN MVEU-724A & MVEU-724B.

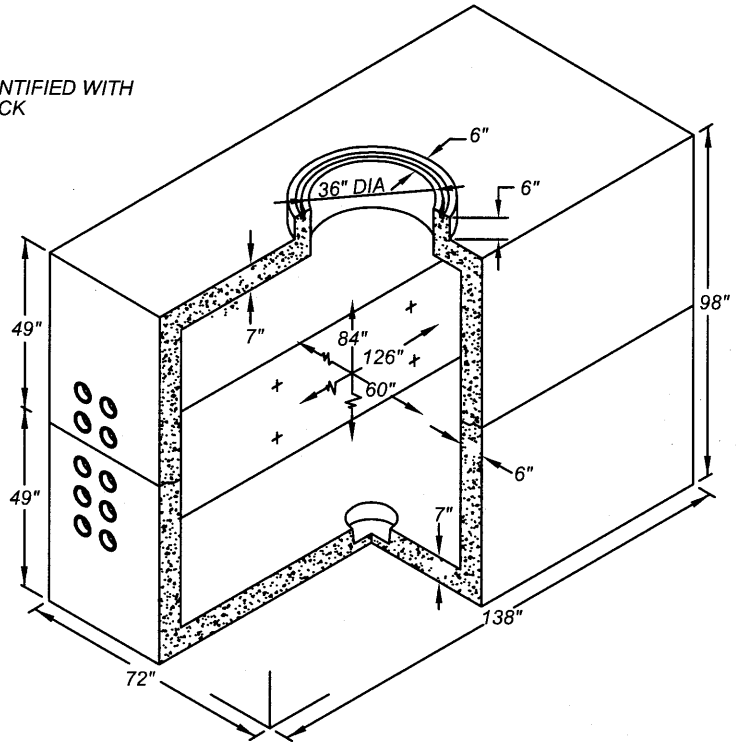
NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 12-27-2021 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 2/4/22 DATE	CITY OF MORENO VALLEY FINANCIAL & MANAGEMENT SERVICES DEPARTMENT - ELECTRIC UTILITY DIVISION	STANDARD PLAN
		CONDUIT BANK REQUIREMENTS	MVEU-727B-0
			SHEET 2 OF 2

MORENO VALLEY STANDARD No MVEU-728A-0

5' x 10'-6" x 7' MANHOLE

ALL COVERS TO BE IDENTIFIED WITH "M.V.U." IN 1½" (MIN) BLOCK RECESSED LETTERS.



MINIMUM EXCAVATION SIZE:
7'-10" x 12'-10" x DEPTH REQUIRED.

NOTES:

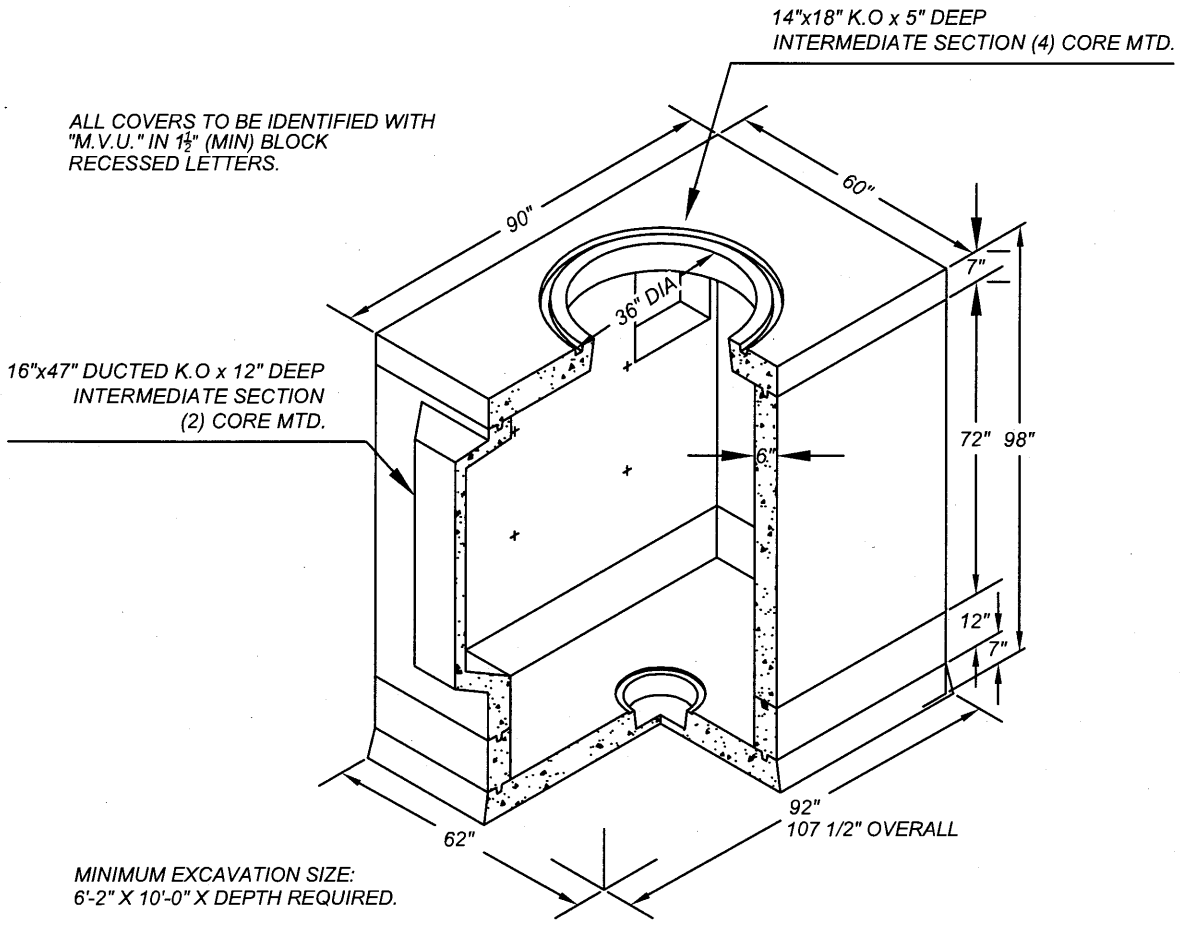
1. MANHOLE DESIGNED IN ACCORDANCE WITH AASHTO H-20-44 TRAFFIC BRIDGE LOADING USING 5,500 PSI CONCRETE COMPRESSIVE STRENGTH AND 60,000 PSI YIELD STRENGTH ASTM A-706 STEEL REINFORCEMENT.
2. MANHOLE TO BE PLACED ON A MIN 6" CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.
3. LIMIT OF COVER OVER TOP SECTION IS 1'-6" TO 4'-0".
4. 13" DIA x 12" DIA SUMP x 4 1/2" DEEP WITH COVER, LOCATE AS FOLLOWS: BOTTOM OF SECTION (1) CORE MTD.
5. INSIDE WALL AND CEILING TO BE PAINTED WHITE.
6. TAMP EXCAVATION FLOOR.
7. ADJUST TO GRADE WITH GRADE RINGS.
8. PRIMARY GROUND HALO TO BE #4 /O BC AND ATTACHED TO ALL GROUND INSERTS.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: 12-27-16 DIVISION MANAGER / DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION	
	APPROVED: 1/20/17 PUBLIC WORKS DIRECTOR / CITY ENGINEER / DATE	**MANHOLE 5' x 10'-6" x 7'**	STANDARD PLAN **MVEU-728A-0** SHEET 1 OF 2

MORENO VALLEY STANDARD No MVEU-728B-0

4' x 6'-6" x 7' MANHOLE



NOTES:

1. MANHOLE DESIGNED IN ACCORDANCE WITH AASHTO H-20-44 TRAFFIC BRIDGE LOADING USING 5,500 PSI CONCRETE COMPRESSIVE STRENGTH AND 60,000 PSI YIELD STRENGTH ASTM A-706 STEEL REINFORCEMENT.
2. MANHOLE TO BE PLACED ON A MIN. 6" CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.
3. LIMIT OF COVER OVER TOP SECTION IS 1'-6" TO 4'-0".
4. 13" DIA x 14" DIA SUMP x 5" DEEP WITH RECESS, LOCATE AS FOLLOWS: BASE SLAB (1) TABLE MTD.
5. INSIDE WALL AND CEILING TO BE PAINTED WHITE.
6. TAMP EXCAVATION FLOOR.
7. ADJUST TO GRADE WITH GRADE RINGS.
8. PRIMARY GROUND HALO TO BE #4 /O BC AND ATTACHED TO ALL GROUND INSERTS.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 12-27-16 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/20/17 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **MANHOLE 4' x 6'-6" x 7'**	STANDARD PLAN **MVEU-728B-0** SHEET 2 OF 2

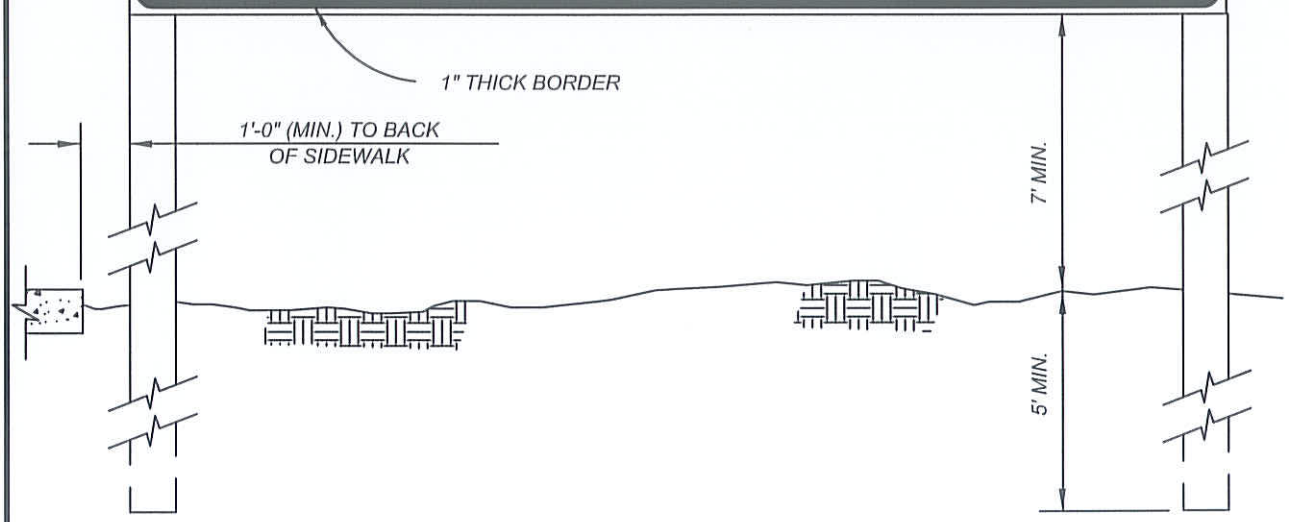
City of Moreno Valley
Electric Utility
Electrical Distribution Project

Project Description
and Limits

Start - Completion Date

City Council:
<Name>, Mayor
<Name>, Mayor Pro Tem
<Name Only>
<Name Only>
<Name Only>

Moreno Valley Public Works
951.413.3500
www.moval.org



NOTES:

1.) SIGNS SHALL BE SECURELY MOUNTED ON (2) 4" x 4" POSTS.

2.) OUTSIDE DIMENSIONS SHALL BE 4' x 8'.

3.) LETTERS AND BORDER SHALL BE BLACK ON WHITE BACKGROUND.

4) ENGINEER TO PROVIDE PROJECT DESCRIPTION, LIMITS, NAMES OF CURRENT CITY COUNCIL MEMBERS AND GRAPHICS.

5) CITY CAN PROVIDE "PROOF" LAYOUT IN DIGITAL FORMAT.

6) CONTRACTOR / DEVELOPER TO PROVIDE FINAL "PROOF" ON 11" x 17" PAPER FROM VENDOR FOR CITY APPROVAL PRIOR TO MANUFACTURING THE SIGN.

7) CONTRACTOR / DEVELOPER TO PROVIDE PHOTOGRAPH OF ACTUAL 4' x 8' SIGN FOR CITY APPROVAL PRIOR TO INSTALLATION.

NOT TO SCALE

	RECOMMENDED: 1-22-14 *DIVISION MANAGER* / *DATE*	CITY OF MORENO VALLEY *PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION*	
	APPROVED: 1/29/14 *PUBLIC WORKS DIRECTOR / CITY ENGINEER* / *DATE*	***PROJECT SIGN ELECTRICAL DISTRIBUTION PROJECT***	*STANDARD PLAN* ***MVEU-729A-0*** *SHEET 1 OF 2*

City of Moreno Valley Electric Utility

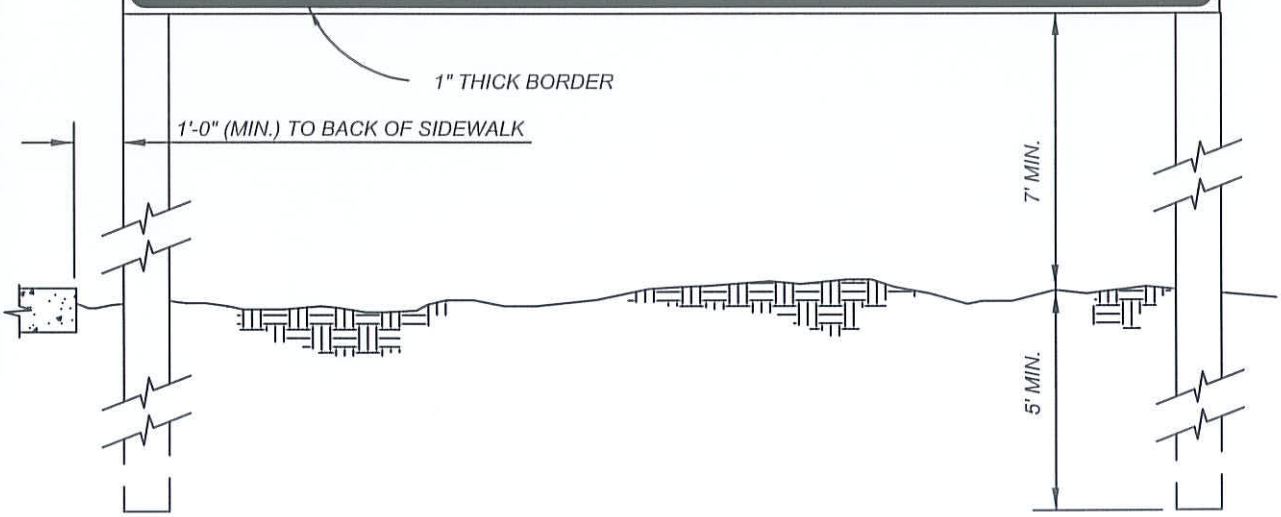
Project Completion

Electrical Distribution Project

Thank you for your cooperation

City Council:
<Name>, Mayor
<Name>, Mayor Pro Tem
<Name Only>
<Name Only>
<Name Only>

Moreno Valley Public Works
951.413.3500
www.moval.org



NOTES:

1.) SIGNS SHALL BE SECURELY MOUNTED ON (2) 4" x 4" POSTS.

2.) OUTSIDE DIMENSIONS SHALL BE 4' x 8'.

3.) LETTERS AND BORDER SHALL BE BLACK ON WHITE BACKGROUND.

4) ENGINEER TO PROVIDE PROJECT DESCRIPTION, LIMITS, NAMES OF CURRENT CITY COUNCIL MEMBERS AND GRAPHICS.

5) CITY CAN PROVIDE "PROOF" LAYOUT IN DIGITAL FORMAT.

6) CONTRACTOR / DEVELOPER TO PROVIDE FINAL "PROOF" ON 11" x 17" PAPER FROM VENDOR FOR CITY APPROVAL PRIOR TO MANUFACTURING THE SIGN.

7) CONTRACTOR / DEVELOPER TO PROVIDE PHOTOGRAPH OF ACTUAL 4' x 8' SIGN FOR CITY APPROVAL PRIOR TO INSTALLATION.

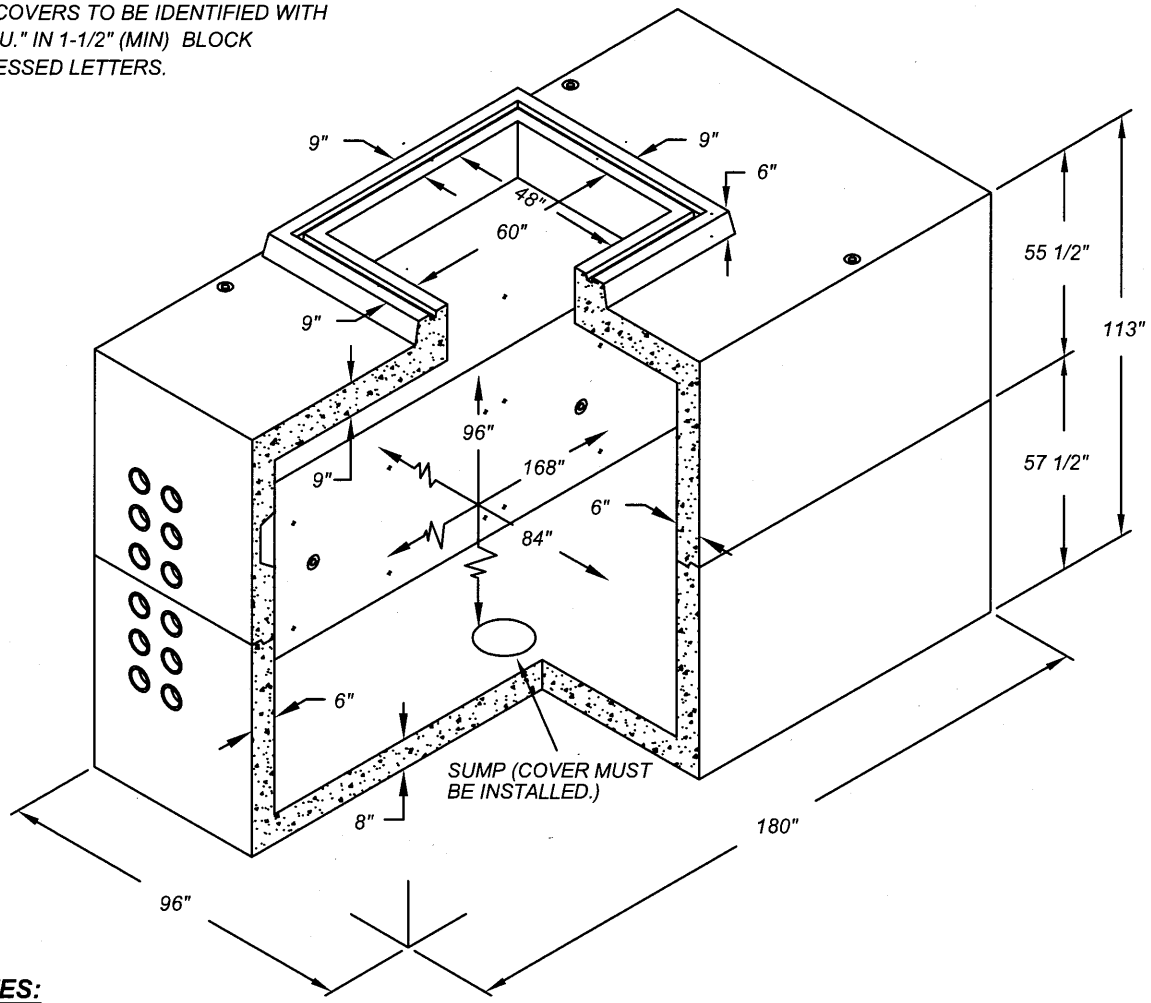
NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER — DATE 1-22-14	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION	
	APPROVED: PUBLIC WORKS DIRECTOR/ CITY ENGINEER — DATE 1/29/14	**PROJECT COMPLETION SIGN ELECTRICAL DISTRIBUTION PROJECT**	STANDARD PLAN **MVEU-729B-0** SHEET 2 OF 2

MORENO VALLEY STANDARD No MVEU-730A-0

PRECAST VAULT ENCLOSURE
7' x 14' x 8'

ALL COVERS TO BE IDENTIFIED WITH "M.V.U." IN 1-1/2" (MIN) BLOCK RECESSED LETTERS.



NOTES:

1.) VAULT DESIGNED IN ACCORDANCE WITH AASHTO H-20-44 TRAFFIC BRIDGE LOAD USING 5,500 PSI COMPRESSIVE STRENGTH CONCRETE AND 60,000 PSI YIELD STRENGTH ASTM 1-706 STEEL REINFORCEMENT.
2.) VAULT TO BE PLACED ON A MIN 6" BASE OF CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.
3.) LIMIT OF COVER OVER ROOF SECTION IS 1'-6" TO 4'-0".
4.) LIMIT OF EMBEDMENT OF BOTTOM SECTION IS 10'-8" TO 13'-2".
5.) ALL WALLS AND CEILINGS TO BE PAINTED WITH WHITE PAINT.
6.) STEEL LADDER TO BE SUPPLIED WITH EACH VAULT.
7.) ADJUST TO GRADE WITH GRADE RINGS.
8.) ENCLOSURE TO BE INSTALLED WITH PRIMARY GROUND ASSEMBLY.
9.) ENCLOSURE TO BE INSTALLED WITH CABLE RACK ASSEMBLY.
10.) 13" DIA x 12" DIA SUMP x 4-1/2" DEEP WITH COVER, LOCATE AS FOLLOWS: BOTTOM OF SECTION (1) CORE MTD.
11.) PRIMARY GROUND TO BE #4 /O BC AND ATTACHED TO ALL GROUND INSERTS.

NOT TO SCALE

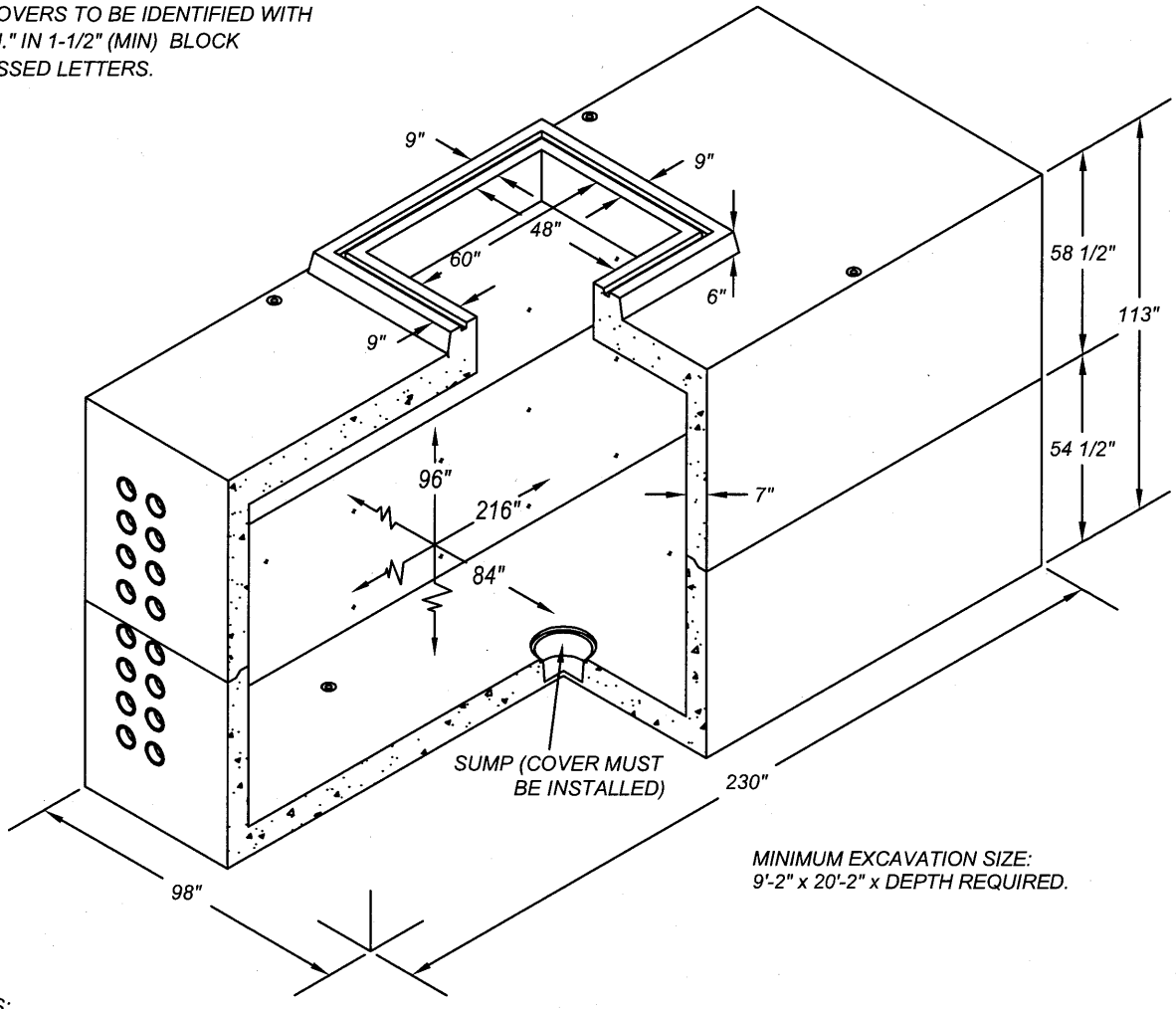
CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 12-27-16 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/20/17 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **VAULT 7' x 14' x 8'**	STANDARD PLAN **MVEU-730A-0** SHEET 1 OF 3

MORENO VALLEY STANDARD No MVEU-730B-0

PRECAST VAULT ENCLOSURE

7' x 18' x 8'

ALL COVERS TO BE IDENTIFIED WITH "M.V.U." IN 1-1/2" (MIN) BLOCK RECESSED LETTERS.



MINIMUM EXCAVATION SIZE:
9'-2" x 20'-2" x DEPTH REQUIRED.

NOTES:

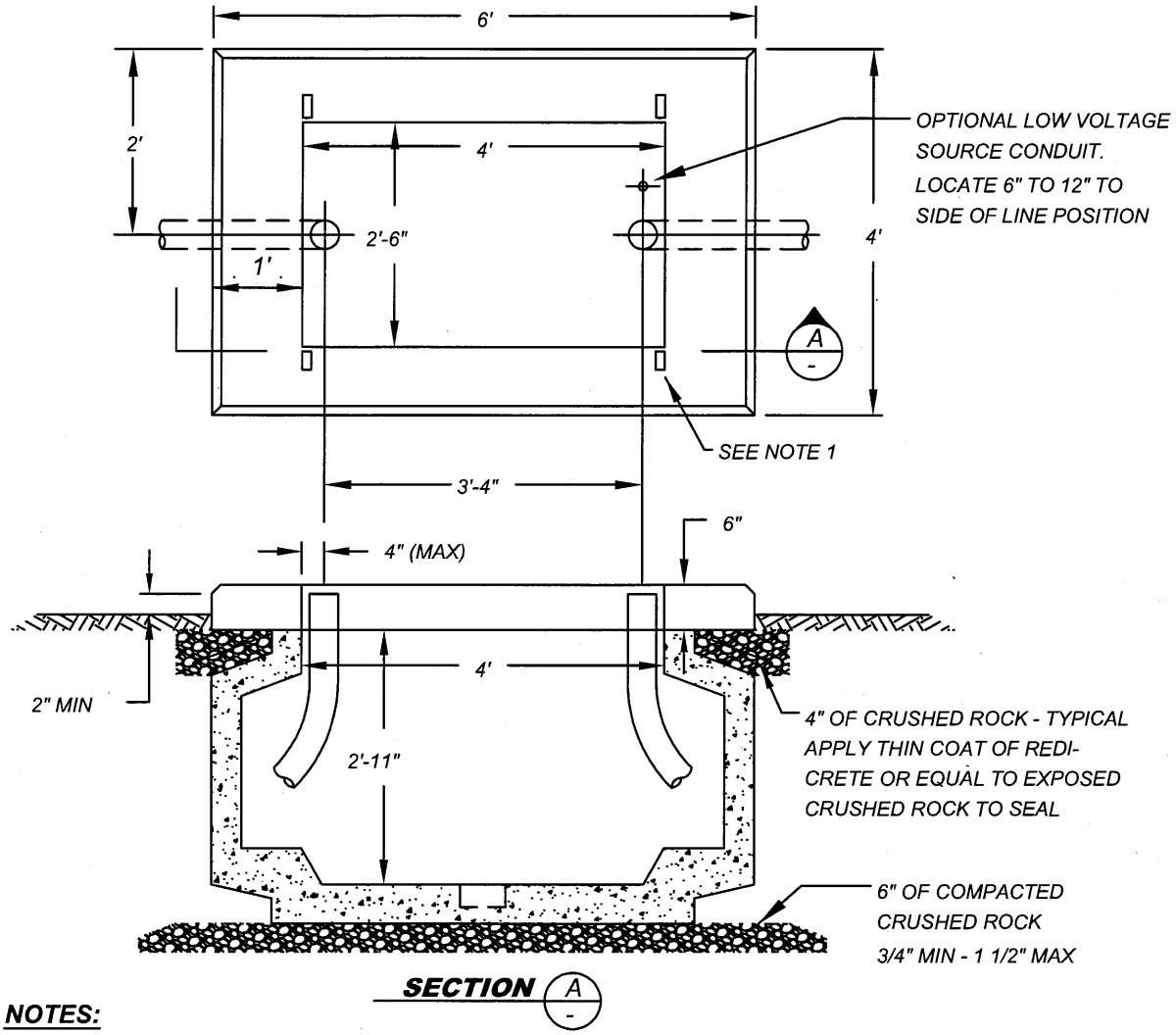
1.) VAULT DESIGNED IN ACCORDANCE WITH AASHTO H-20-44 TRAFFIC BRIDGE LOAD USING 5,500 PSI COMPRESSIVE STRENGTH CONCRETE AND 60,000 PSI YIELD STRENGTH ASTM 1-706 STEEL REINFORCEMENT.
2.) VAULT TO BE PLACED ON A MIN. 6" BASE OF CRUSHER RUN FOR EASE OF INSTALLATION AND EVEN LOAD DISTRIBUTION.
3.) LIMIT OF COVER OVER ROOF SECTION IS 1'-6" TO 4'-0".
4.) LIMIT OF EMBEDMENT OF BOTTOM SECTION IS 10'-8" TO 13'-2".
5.) ALL WALLS AND CEILINGS TO BE PAINTED WITH WHITE PAINT.
6.) STEEL LADDER TO BE SUPPLIED WITH EACH VAULT.
7.) ADJUST TO GRADE WITH GRADE RINGS.
8.) ENCLOSURE TO BE INSTALLED WITH PRIMARY GROUND ASSEMBLY.
9.) ENCLOSURE TO BE INSTALLED WITH CABLE RACK ASSEMBLY.
10.) 13" DIA x 14" DIA SUMP x 5" DEEP WITH RECESS, LOCATE AS FOLLOWS: BOTTOM OF SECTION (1) CORE MTD.
11.) PRIMARY GROUND TO BE #4 /O BC AND ATTACHED TO ALL GROUND INSERTS.

NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 12.27.16 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION	
	APPROVED: PUBLIC WORKS DIRECTOR/ CITY ENGINEER 1/20/17 DATE	**VAULT 7' x 18' x 8'**	STANDARD PLAN **MVEU-730B-0** SHEET 2 OF 3

MORENO VALLEY STANDARD No MVEU-730C-0

4' x 6' PAD WITH 2.5' x 4' BOX FOR PMH-4 OR PMH-5 SWITCHGEAR



SECTION A

NOTES:

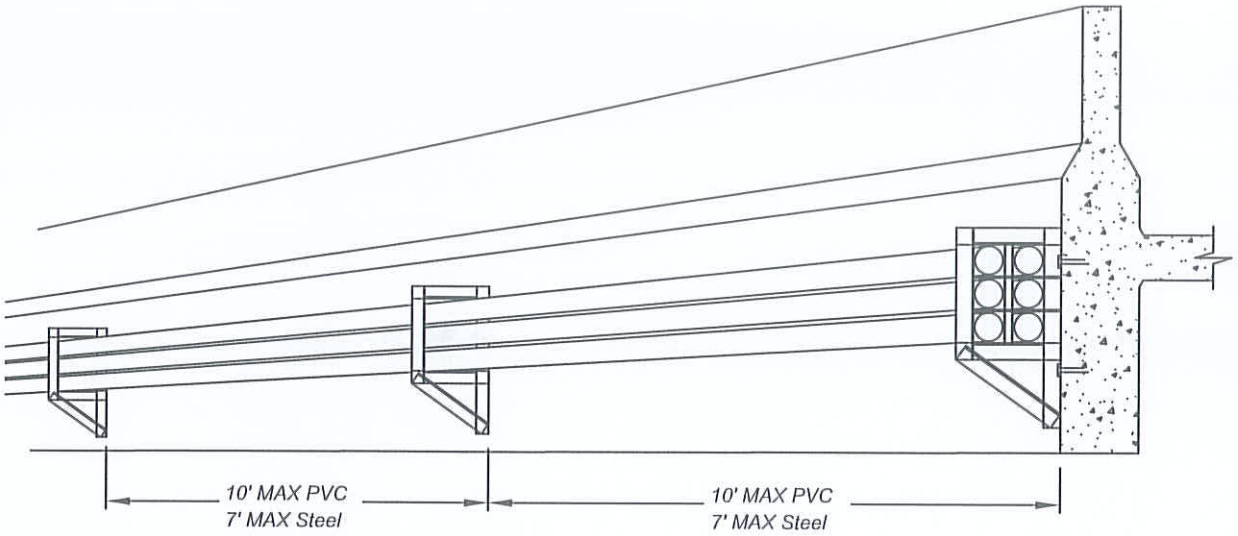
1. IDENTIFY BUS, OR FUSE POSITION ON DRAWING.
2. RISER BEND MUST TERMINATE VERTICALLY.
3. GALVANIZED UNISTRUT CHANNEL FOR SECURING SWITCH TO PAD.
4. SWITCHGEAR CAN ONLY BE INSTALLED WITH CABINET DOORS FACING ENDS. CABINET CAN BE ROTATED 180 DEGREES.
5. CABLE CLEAR OPENING SHALL BE COVERED WITH AN ELECTRICAL-APPROVED COVER AT THE TIME OF STRUCTURE PLACEMENT.
6. BACKFILL AROUND THE STRUCTURE SHALL BE WITH A MINIMUM OF ONE SACK PER YARD SAND CEMENT SLURRY TO WITHIN ONE FOOT OF FINISHED GRADE. THE SURFACE ELEVATION OF THE SLURRY SHALL NOT VARY MORE THAN ONE FOOT AROUND THE PERIMETER OF THE STRUCTURE AS IT IS BEING PLACED.
7. MINIMUM EXCAVATION PER MANUFACTURES RECOMMENDATIONS.
8. REFER TO STDS MVEU-722 & MVEU-723 FOR ADDITIONAL DETAILS.
9. ENCLOSURE TO BE INSTALLED WITH PRIMARY GROUND ASSEMBLY AND CABLE RACK ASSEMBLY.

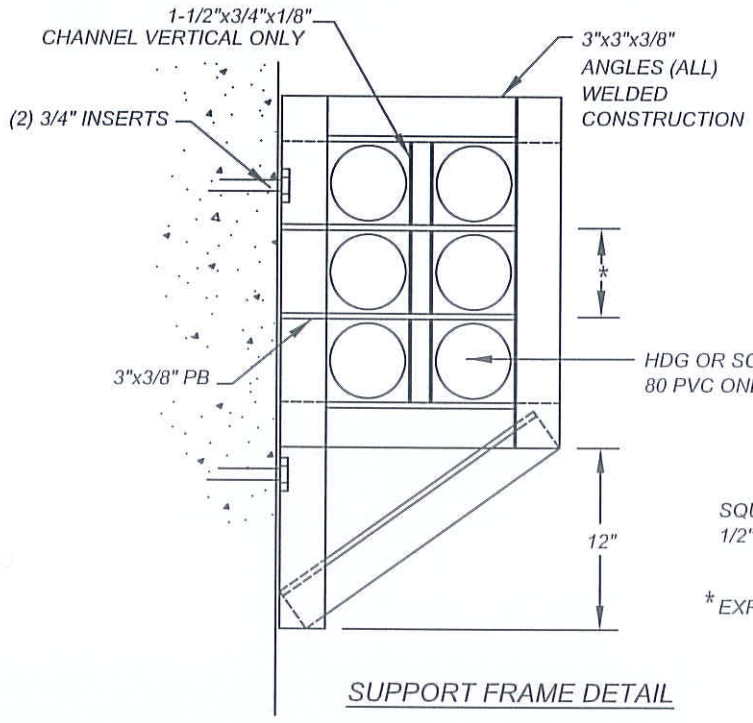
NOT TO SCALE

CITY OF MORENO VALLEY DECEMBER 3, 1984	RECOMMENDED: DIVISION MANAGER 12-27-16 DATE APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER 1/20/17 DATE	CITY OF MORENO VALLEY PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION **4' x 6' PAD WITH 2.5' x 4' BOX FOR PMH-4 OR PMH-5 SWITCHGEAR**	STANDARD PLAN **MVEU-730C-0** SHEET 3 OF 3

MORENO VALLEY STANDARD NO. MVEU-731-0

SUPPORT FOR CONDUITS ON BRIDGES





SQUARES FOR CONDUIT TO BE APPROXIMATE.
1/2" LARGER THAN O.D. OF CONDUIT

* EXPANSION JOINTS REQUIRED

SUPPORT FRAME DETAIL

NOT TO SCALE

CITY OF MORENO VALLEY · DECEMBER 3, 1984

RECOMMENDED:
DIVISION MANAGER — DATE 1-15-14

APPROVED:
PUBLIC WORKS DIRECTOR / CITY ENGINEER — DATE 1/29/14

CITY OF MORENO VALLEY

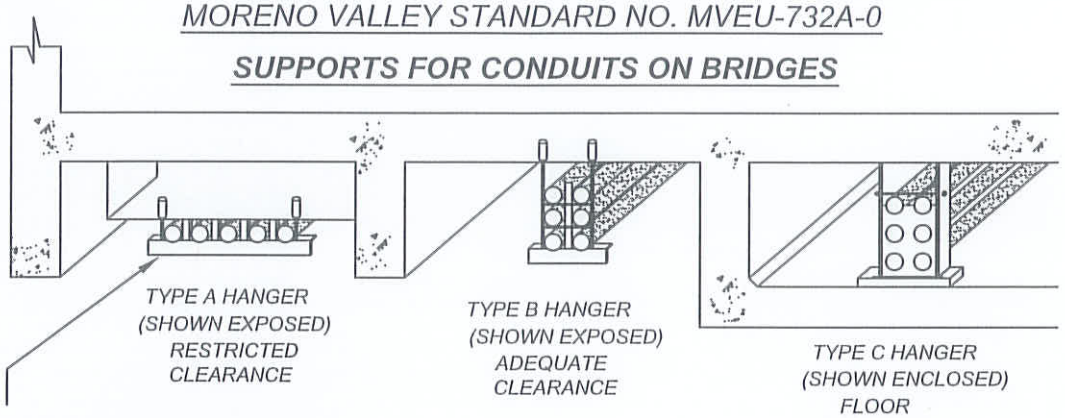
PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION

SUPPORT FOR CONDUITS ON BRIDGES

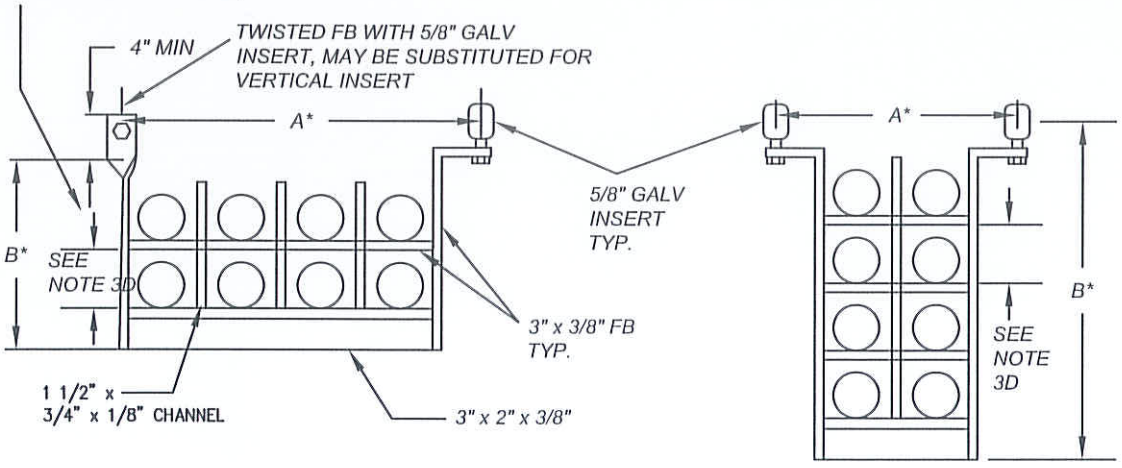
STANDARD PLAN
MVEU-731-0
SHEET 1 OF 1

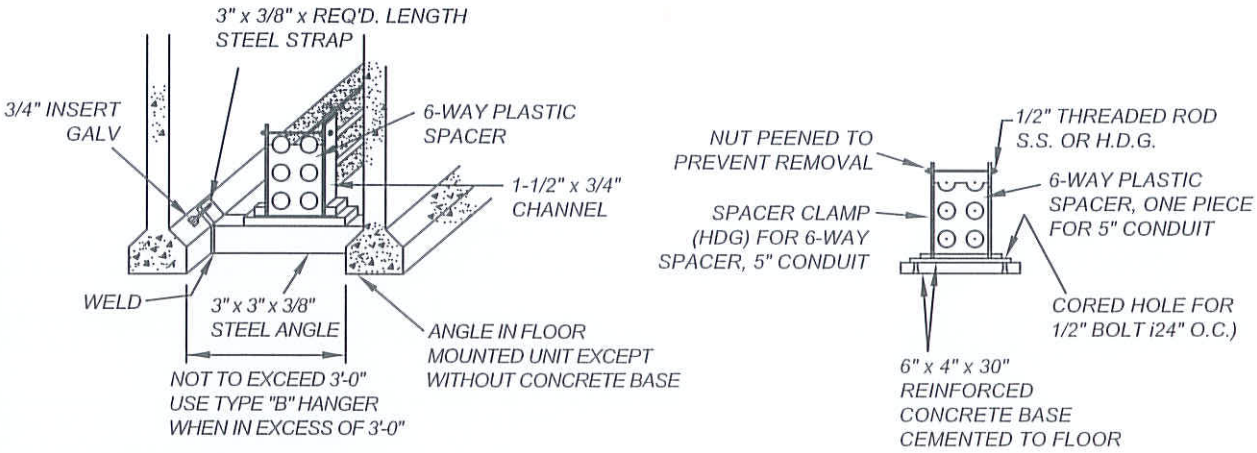
MORENO VALLEY STANDARD NO. MVEU-732A-0

SUPPORTS FOR CONDUITS ON BRIDGES



CONDUIT MAY BE SINGLE OR DOUBLE TIER
(CENTER SUPPORT REQUIRED IF IN
EXCESS OF 8 CONDUITS TOTAL)





TYPE D HANGER
ALTERNATE TO HANGER SUPPORT
(SHOWN EXPOSED)

NOT TO SCALE

CITY OF MORENO VALLEY · DECEMBER 3, 1984

RECOMMENDED: _____ 1-15-14
DIVISION MANAGER / DATE

APPROVED: _____ 1/29/14
PUBLIC WORKS DIRECTOR / CITY ENGINEER / DATE

CITY OF MORENO VALLEY

PUBLIC WORKS DEPARTMENT - ELECTRIC UTILITY DIVISION

ALTERNATE SUPPORTS FOR CONDUITS ON BRIDGES

STANDARD PLAN
MVEU-732A-0
SHEET 1 OF 2

MORENO VALLEY STANDARD NO. MVEU-732B-0

SUPPORTS FOR CONDUITS ON BRIDGES

I. CONDUIT

A. FOR EXPOSED INSTALLATIONS-SCHEDULE 80 PVC OR STANDARD HDG STEEL.

B. FOR ENCLOSED INSTALLATIONS-PVC, OR HDG STEEL.

C. CONDUIT CONFIGURATION TO BE SHOWN ON WORKING DRAWING.

D. FOLLOWING ARE THE DIMENSIONS OF THE MINIMUM OPENING IN BRIDGE ABUTMENTS FOR CONDUIT BANK ENTRANCE AND EXIT. ALL FIGURES ARE BASED ON 5-INCH PLASTIC CONDUIT, VERTICAL CONFIGURATION, AND SPACED.

4 CONDUIT BANK ..... 18" WIDE BY 18" HIGH

6 CONDUIT BANK ..... 18" WIDE BY 26" HIGH

8 CONDUIT BANK ..... 18" WIDE BY 33" HIGH

10 CONDUIT BANK ..... 18" WIDE BY 41" HIGH

II. EXPANSION JOINTS

EXPANSION JOINT SHOULD BE INSTALLED AS FOLLOWS:

1. HDG STEEL-AT EACH BRIDGE EXPANSION JOINT.

2. PLASTIC-AT 200' MAXIMUM INTERVALS OR, IF BRIDGE IS SHORTER THAN 200',ONE JOINT.

3. CONDUIT TO BE ANCHORED AT EACH EXPANSION JOINT BY SOLVENT WELDING COLLARS ON CONDUIT AT EACH SIDE OF HANGER SUPPORT.

III. HANGER SUPPORT

A. 10' MAXIMUM SPACING FOR SCHEDULE 80 PLASTIC CONDUIT.

B. SUPPORTS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION. (ALL BOLTS, STUDS, NUTS, ETC., TO BE STAINLESS STEEL.

C. SUPPORTS SHOULD BE LOOSE ENOUGH TO ALLOW CONDUIT TO EXPAND AND CONTRACT WITH TEMPERATURE CHANGES.

D. SQUARES THAT ENCLOSE CONDUIT IN SUPPORTS SHOULD BE APPROXIMATELY 1/2" LARGER THAN THE O.D. OF THE CONDUIT.

WEIGHTS FOR MATERIALS:	BOLTS:
SCH 80 PVC	1/2" Ø = 0.7 # FT
2.8 # FT	5/8" Ø = 1.1 # FT
3.9 # FT	3/4" Ø = 1.5 # FT
5.3 # FT	

3" x 3" x 3/8 STEEL ANGLE = 7.2 # FT
1-1/2" x 3/4" STEEL CHANNEL = 2.5 # FT
2' x 4" WOOD = 1.6 # FT
CONCRETE BASE = 40 #

NOT TO SCALE

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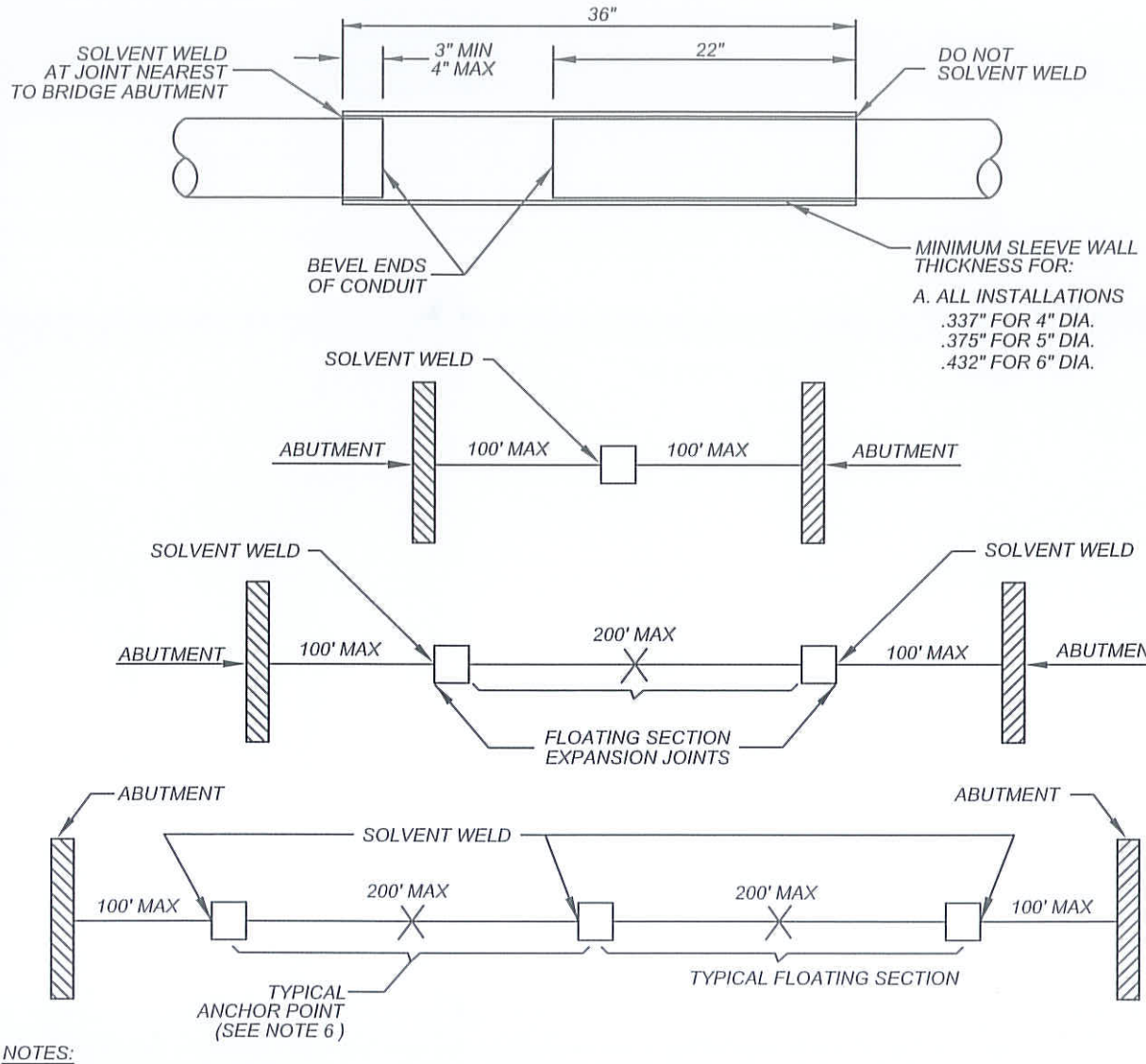
	APPROVED: PUBLIC WORKS DIRECTOR / CITY ENGINEER / DATE 1/29/14	ALTERNATE SUPPORTS FOR CONDUITS ON BRIDGES	STANDARD PLAN MVEU-732B-0 SHEET 2 OF 2

MORENO VALLEY STANDARD NO. MVEU-733-0

EXPANSION JOINT FOR PLASTIC CONDUIT



NOTES:

1. THE EXPANSION JOINT IS A LENGTH OF COUPLING STOCK EXTRUDED FROM THE SAME MATERIAL AS THE CONDUIT THAT IT JOINS.
2. THE MATING ENDS OF CONDUIT SHALL BE BEVELED TO PROVIDE A SMOOTH TRANSITION WITHIN THE JOINT.
3. THE EXPANSION JOINT SHALL BE SOLVENT WELDED 3 TO 4 INCHES ONTO ONE END OF THE CONDUIT.
4. THE MATING END OF THE CONDUIT SHALL THEN BE POSITIONED 22" INTO THE FREE END OF THE EXPANSION JOINT. DO NOT SOLVENT WELD.
5. INSTALL ALL EXPANSION JOINTS AT THE MIDWAY POINT BETWEEN CONDUIT SUPPORTS SO THE MAXIMUM DISTANCE CAN BE MAINTAINED FROM ALL SPACERS, SUPPORTS, OR STRAPS.
6. INSTALL THE EXPANSION JOINT WITHIN 100' OF THE BRIDGE ABUTMENT. WHEN ONLY ONE EXPANSION JOINT IS REQUIRED. DO NOT ANCHOR THE EXPANSION JOINT OR CONDUIT. WHEN TWO OR MORE EXPANSION JOINTS ARE REQUIRED, EACH SECTION OF FLOATING CONDUIT MUST BE ANCHORED AT MID-POINT BETWEEN THE EXPANSION JOINTS TO PREVENT EXCESSIVE LONGITUDINAL MOVEMENT. CONDUIT TO BE ANCHORED BY SOLVENT WELDING COLLARS AT EACH SIDE OF HANGER SUPPORT.

NOT TO SCALE

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