



IMPROVEMENT PLAN STANDARD NOTES

Where City of Meniffee Standard Notes read "Developer/Contractor" the applicant may edit as necessary to describe the project specific responsible person. Each item of work shall be performed by the Developer/Contractor unless stated otherwise. Show applicable notes on Plan.

A. General Notes

1. All work shall conform to the requirements of the City of Meniffee Standard Details and Specifications, the current Standard Specifications for Public Works Construction (the "Greenbook"), the Riverside County Street Improvement Standards and Specifications and Standard Plans; County Ordinance No. 461; Caltrans Standard Plans and specifications; California Manual on Uniform Traffic Control Devices.
2. Prior to start of work, the Developer/Contractor shall apply to the City of Meniffee Engineering Department for an Encroachment Permit for work performed within public right-of-way and to be responsible for satisfactory compliance for current environmental regulations during the life of construction activities for this project. Additional studies may be required.
3. Prior to start of work, the Developer/Contractor shall apply to the California Department of Transportation (Caltrans) for an Encroachment Permit for work performed within the State right-of-way.
4. Work in public streets, once begun, shall be prosecuted to completion without delay so as to provide minimum inconvenience to adjacent property owners and to the traveling public. Failure to comply with this requirement is a violation of the City of Meniffee Encroachment Permit.
5. When improvement plans have been submitted to the City for plan checking and the plan checking process has been interrupted for a period of one year or more, the plans shall be deemed abandoned. Approved improvement plans for all subdivisions shall be deemed abandoned if construction has not commenced within two years of the latest approval date (one year for non-subdivisions). If construction is interrupted for a period of one year or more, the plans shall be deemed abandoned. Abandoned plans shall be re-submitted for review and all fees shall be paid in accordance with the plan check and processing policy prior to any permits being issued.
6. Approval of this plan by the City of Meniffee does not constitute a representation as to the accuracy of, the location of, or the existence or non-existence of, any underground utility pipe or structure within the limits of this project. This note applies to all pages.
7. All revisions to improvement plans, or material substitution requests, proposed during construction shall be submitted in writing to the City Engineering Department by the



Engineer of Record and shall follow the procedures as approved by the City Engineer.

8. Locations of existing underground utilities are approximate. The Developer/Contractor shall determine the exact locations and verify conditions on the job site prior to commencing work. The Developer/Contractor shall be fully responsible for damages occurred due to failure to locate and preserve underground utilities. Hand dig as needed until clear of obstructions.
9. Notify Underground Service Alert, (800) 227-2600, and all concerned utility companies at least two working days in advance of excavation.
10. A preconstruction meeting with the Public Works Inspector is required prior to start of work.
11. Right of Entry for any work performed on adjacent properties is required. Permission for Right of Entry shall be obtained in writing and the letter shall comply with City format.
12. Approval of plans and / or permit issuance does not relieve the Permittee of their responsibility to maintain work within the project property boundaries and dedicated City right-of-way. Trespassing on Private property is against the law and cause for cancellation of Permit and issuance of Stop Work notice.
13. It is the responsibility of the permittee to submit a request for permit extension to the City Engineer in writing prior to permit expiration. Extension and expiration of permits shall be in accordance with the Uniform Building Code and /or the City of Menifee Engineering Design Guidelines Policies and Procedures.
14. The Developer/Contractor shall be responsible for any clean up on City of Menifee right-of-way affected by Developer's/Contractor's work. The Developer/Contractor shall keep City of Menifee right-of-way clean of debris, with dust and other nuisances being controlled at all times. Method of street cleaning shall be wet sweeping of all paved areas. There shall be no stockpiling of construction materials within the City of Menifee right-of-way without the permission of the City Engineer.
15. The Contractor shall contact the City of Menifee Public Works Inspector 48 hours prior to construction at (951) 672-6777.



B. Street Improvement Notes

NOTE: Use applicable notes only.

1. Underground facilities, with laterals, shall be in place prior to cap paving the street, including, but not limited to, the following: sewer, water, electric, telephone, cable, gas, storm drains.
2. Street Section shall be determined by the Developer's soils engineer and shall be based on subgrade soils tests and the City-supplied traffic indexes. Plans shall be revised to show actual pavement and base section to be constructed.
3. As determined by the City Engineer, the Developer/Contractor shall provide road improvements to centerline, and may be required to reconstruct existing pavement, including base, and matching overlay required to meet the structural standards for the current assigned traffic index.
4. A.C. pavement installed in multiple lifts shall have at least 2" in the first lift and at least 2" of asphalt in all succeeding lifts.
5. A.C. pavement sections 4" thick and greater shall be constructed in two lifts. A.C. pavement base course shall be type B-PG70-10 with a minimum 2" thickness, and the final lift shall be Type C2-PG70-10 with a minimum 2" thickness.
6. Approved signing and striping plans shall be subject to review and revision by the City of Menifee Engineering Department if not constructed within 12 months of date of City approval.
7. Any signage and striping damaged during construction shall be repaired to its original condition.
8. Provide blue retroreflective raised pavement markers (RPMs) on private streets, public streets, and driveways to indicate location of fire hydrants. RPMs shall be installed per City of Menifee Standard plan No. 705
9. Provide additional signs and markings not included in the signing and striping plan within the project area, or on roadways adjacent to the project boundaries, upon the request of the City Engineer, to improve traffic safety on the roads under the jurisdiction of the Developer/Contractor.
10. Traffic Control Plans on existing roadways shall be prepared by a Traffic or Civil Engineer, registered in the state of California, and submitted for review and approval by the City Engineering Department, prior to permit issuance.



11. The contractor shall take all necessary and proper precautions to protect adjacent properties from any and all damage that may occur from storm water runoff and/or deposition of debris resulting from any and all work in connection with his private development construction.
12. Existing storm drain pipes/culverts (whether to be connected to, extended, adjusted, drained to, or just in the project vicinity) must be repaired and/or cleaned to make them functional and acceptable to the City Engineer.
13. The Developer/Contractor shall apply to Riverside County Flood Control and Water Conservation District (RCFC & WCD) for permits when any storm drain pipe needs to be connected with a RCFC & WCD facility and add Permit # _____ on the plan.
14. Construction projects that disturb one acre or more, or on sites that are part of a larger common plan of development that disturbs one acre or more, shall obtain a National Pollutant Discharge Elimination System (NPDES) permit. Developers/Contractors shall file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB), prepare a Storm Water Pollution Prevention Plan (SWPPP) and Monitoring Plan for the site. The Project shall comply with the latest regulations specific to the NPDES at the time of permit issuance. Prior to construction, the Developer/Contractor shall provide to the City of Menifee a copy of the NOI with a valid Waste Discharge Identification (WDID) number.
15. The Developer/Contractor shall provide and install street name signs conforming to the City of Menifee Standard Plan No. 815 and No. 816 as applies. The Developer/Contractor shall secure the approval of the City Engineering Department for type and location of the street name signs and markings prior to installation.
16. Provide and install street trees in accordance with the approved Landscaping Plans and City of Menifee Landscaping Guidelines.
17. Provide landscaping consisting of grass and parkway trees within parkways on local residential streets without separate landscape plans per the approval of the City Community Development Department. Other types of landscaping in these areas, and landscaping on other streets, shall require separate landscape plans. Landscaping encroachments shall conform to City of Menifee Landscaping Guidelines.
18. Provide street lights in accordance with the approved street lighting plan and provide for the temporary operation of the street lighting system.
19. Provide curb depressions and driveway approaches according to the City of Menifee Standard Plan No. 205, 206, 207 and No. 208 as approved by the City Engineer.
20. There shall be no above-ground obstructions in any portion of the sidewalk (where the width, exclusive of top of curb, is 5.5 feet or less). Where power/telephone/cable



poles, street light standards, fire hydrants, and control boxes occur in the 5.5 foot sidewalk, the sidewalk shall be modified per City of Menifee Standard Plan 402.

21. "Patching" of sidewalk damage is prohibited; repairs to sidewalk shall include replacement of the entire panel from "joint-to-joint".
22. For driveway reconstruction, Developer/Contractor shall submit to the Menifee City Engineer proof of driveway owner notification prior to construction.
23. All PCC curb ramps shall include a detectable warning system, to include truncated domes, per ADA requirements. The detectable warning system shall be Armor-Tile cast in place system, or approved equal, no adhesives shall be allowed. The contrasting color shall be yellow.
24. Cross gutters shall be constructed over 8" minimum crushed aggregate base compacted to 95% relative density.
25. Mailboxes and posts shall be installed per an approved City standard. Submit plot plan of building orientation on lot and location of mail box and post to the U.S. Post Office for approval prior to installation.
26. As-built plans and asset/attribute data shall be submitted to the City prior to acceptance of improvements and release of bonds.



C. Parking Lot Paving Notes

1. Minimum parking lot grade shall be 1.0 percent.
2. Minimum Grade for ribbon drains shall be 0.50 percent.
3. Provide an approved soil sterilizer on subgrade surfaces prior to placement of paving.
4. Apply Asphaltic Emulsion (Fog Seal) not less than fourteen days following placement of the asphalt surfacing. Fog Seal shall be applied at a rate of 0.05 gallon per square yard. Asphaltic emulsion shall conform to Section 37, 39 and 94 of Caltrans Standard Specifications.
5. A minimum of 2 inspections shall be provided:
 - Inspection #1 at the completion of the base course.
 - Inspection #2 at the time AC and PCC are placed.
6. A compaction report by a soils engineer shall certify 95 percent compaction of base for asphalt concrete (AC) and 90 percent compaction of base for Portland cement concrete (PCC) prior to calling for Inspection #2 and placement of AC and PCC.
7. If no preliminary soils report is provided specifying the paving section, the structural section shall be 3 inches AC and 4 inches Class II aggregate base conforming to Riverside County Street Improvement Standards and Specifications Ordinance No. 461.



E. Storm Drain Notes

NOTE: Use applicable notes only.

1. All work shall conform to the current Standard Specifications for Public Works Construction (the "Greenbook") and all "Standard Plans" and "Special Provisions" referenced therein. Hydraulic design shall conform to the requirements of City of Menifee storm drain design guidelines; the requirements of Riverside County Land Division Ordinance No. 460, Section 11; the requirements of the Riverside County Water Quality Management Plan for Urban Runoff; and Riverside County Flood Control District and Water Conservation District (RCFCD) Standard Drawings policies and procedures.
2. When cover to finish grade is 2 feet or less, provide class C (420-C-2000) concrete backfill from bottom of pipe to minimum depth over pipe of 4 inches. For culverts, provide minimum two feet cover at hinge point/flow line from top of pavement to top of culvert (keep out of base). If cover is less, provide concrete saddle per Caltrans Standard Specifications Section 19-3.062 or equal. Pipes maintained by the City of Menifee shall be backfilled per City of Menifee Standard Plan No. 812.
3. The Contractor's attention is directed to Greenbook Section 7-10.4.1 in regard to safety orders and shall conform to the requirements as shown on City of Menifee Standard Plan No. 813.
4. All structural concrete shall be Portland cement concrete with an ultimate 28-day compressive strength of 3250 psi, unless otherwise noted.
5. No concrete shall be placed until the forms and reinforcing steel have been placed, inspected, and approved.
6. Transverse reinforcement and transverse joints shall be placed at right angles (or radial) to the conduit centerline except as otherwise shown on the drawings.
7. All steel adjacent to face of concrete shall have 2 1/2" clearance unless otherwise specified. Steel adjacent to face of concrete against earth shall have 3" clearance.
8. Reinforcement shall be deformed bars of intermediate grade steel, per ASTM A615, Grade 60.
9. All bar bends and hooks shall conform to the American Concrete Institute "Manual of Standard Practices".
10. Dimensions from face of concrete to steel are to centerline of steel unless otherwise noted.
11. All steel that is to be continuous shall have a minimum lap of 30 bar diameters or 18" whichever is greater. Longitudinal steel shall be continuous and extend through all construction joints.



12. All construction joints in the footing of slabs and walls shall be in the same plane. No staggering of joints will be permitted.
13. All exposed edges shall be finished with a 3/4" chamfer.
14. Unless otherwise shown, concrete dimensions shall be measured vertically or horizontally and parallel or at right angles (or radial) to the centerline of construction.
15. All RCP pipes are to be inspected and approved by the Public Works Inspector prior to installation.
16. Storm Drain manholes are to be raised after final lift of pavement.
17. All backfill and fills outside of street right-of-way shall be compacted to 90 percent of maximum density as determined by ASTM Soil Compaction Test D1557 Method "D" unless otherwise specified. Certification by a Registered California Soils Engineer shall be submitted to the Engineering Department prior to acceptance of the work by the City.
18. All backfill and fills within street right-of-way shall be compacted in accordance with City of Menifee Standard Plan No. 812 unless otherwise noted and inspected by the City Public Works Inspector. Contractor shall notify the City Public Works Inspector at least 48 hours in advance prior to soil testing by the Private Soils Engineer.
19. All backfill and fill around closed conduit in the street right-of-way shall be brought up to subgrade of the road or to 2 feet above the top of conduit, whichever is less. The Public Works Inspector shall inspect all backfill and fill above aforementioned limits. The Contractor shall contact the Public Works Department at (951) 672-6777 to request an inspection at least 48 hours in advance.
20. The Public Works Inspector may have the option to require concrete backfill during construction when the pipe has less than 1 foot of cover and is subject to heavy equipment traffic. The concrete backfill shall consist of 1:3:5 mix, Portland cement concrete poured from wall to wall of trench and from bottom of trench to a minimum of 4 inches over the top of the pipe.
21. All pipes shall be placed in trench in natural ground and/or compacted fill. The ground level before the trenching shall be at least 3 feet above the top of the pipe elevation, or at finish surface elevation, whichever is less. All backfill in easements shall be compacted to the density required by the Grading Plan or Soils Report, whichever is more restrictive.
22. Pipe shall be embedded 5 inches into all structures including inlet and outlet headwalls, unless otherwise specified.
23. All catch basins within the dedicated street right-of-way shall be constructed per Street Improvement Plan stationing. All catch basins and connector pipes are to be inspected by the Public Works Inspector.
24. A system for contributory drainage operable at all times shall be provided by the Contractor to the satisfaction of the Menifee City Engineer until this storm drain system is accepted by the City.



25. Existing utilities shall be maintained in place by the Contractor, unless otherwise noted.
26. Where the utilities are indicated in the drawings to be supported, said supports shall be in accordance with A.P.W.A. Standard Plan No. 224-1, unless otherwise indicated.
27. All openings resulting from the cutting or partial removal of existing culverts, pipes or similar structures shall be sealed with 8 inches of brick and mortar and 6 inches of concrete, unless otherwise shown.
28. RCFCD Standard Manhole Nos. "1"-MH251, "2"-MH252, "3"-MH253 shall use RCFCD Standard Plan No. MH260 for the "24-Inch Manhole Frame and Cover" and RCFCD MH259 for the "Standard Drop Step".
29. All manhole covers not in street paving shall be provided with Allen socket set screw locking devices. The Contractor shall drill and tap two holes to a depth of 1 inch at 90 degrees to pick hole and install 3/4" x 3/4" Allen socket set screws.
30. At the beginning and end of all pours, layers of reinforcement shall be placed within 3" of the transverse construction joint.
31. After backfilling and prior to street paving, an inspection of said line by video shall be required at no cost to the City. All new mainline storm drains shall be video inspected per the provisions of Greenbook Section 500-1.1.5. The results of the video inspection shall be recorded in DVD format and a copy shall be provided to the City at no cost. The Developer of the project shall notify the City of Menifee in writing at least 48 hours in advance of the scheduled date of the video inspection.
32. Resurface all trenches within paved areas per City of Menifee Standard Plan No. 812. Full compliance with the City of Menifee street opening and pavement restoration regulations will be required.
33. Video Recording. Contractor shall submit video recording of mainline trunks along with audio detailing the size, start and end station and SD manhole number prior to final surface paving.

Riprap Notes (As applicable)

1. See Grading Plan Standard Notes Section D, Drainage Notes.

Cast-In-Place Concrete (as Applicable)

Note: Cast-in-place storm drain may be used in lieu of RCP for DOD > 30" per Greenbook section 306-4.6.1

1. CIPCP installation. The contractor shall submit one copy of the manufacturer's CIPCP (cast in place non-reinforced concrete pipe) installation manual to the engineer 10 working days prior to the installation process. The concrete inspector



- shall perform the thickness inspections as outlined in Greenbook section 306-4.7.2 (CIPCP thickness test requirements).
2. Construction materials, methods and testing shall conform to Greenbook section 306-4 of the standard specifications regarding cast-in-place non-reinforced concrete pipe.
 3. Cast-in-place pipe shall not be placed except in the presence of a City Inspector or other Menifee City Engineer representative. Additional inspection fees required.
 4. Trenching and backfilling shall not be performed except in the presence of the soils engineer, as directed by the City Inspector or other Menifee City Engineer representative.
 5. Cast-in-place pipe may be constructed only in ground capable of standing unsupported from the bottom of the trench to the top of the pipe without sloughing. The ground shall not contain trash, debris, or bituminous materials. Cast-in-place pipes to be constructed on expansive soils shall be installed per Soils Engineer recommendations.
 6. Cast-in-place pipe may be constructed in fill provided that the fill is certified and approved as meeting the design assumptions. If the minimum soils parameters assumed for the design are not met, reinforced concrete pipe shall be substituted. Cast-in-place pipe shall not be constructed in fill that extends below the pipe for a distance of more than twice the outside pipe diameter.
 7. Cast-in-place pipe shall not be constructed in ground, where groundwater is above the bottom of the pipe, or which is saturated or contains water in such quantities as to be harmful to the concrete.
 8. Backfilling of cast-in-place pipe shall not be done until the concrete has developed 80 percent of its design strength. No traffic (including construction equipment) shall be permitted on top of the pipe until the concrete has attained its design strength.
 9. Water densification methods of backfilling the pipe shall not be permitted. Mechanical compaction will be required. An 8-inch lift of loose backfill "shading" over the pipe will not be permitted until 24 hours after initial placement.
 10. Concrete shall be class 560-C-3250 (minimum) using Type II cement, unless otherwise noted.
 11. Fly ash, meeting ASTM C 618, may be used to substitute for cement (up to 15 percent of cement by weight). When fly ash is used, water reducing agents meeting ASTM C 494 may be permitted in an amount recommended by the supplier and approved by the City Inspector. No other admixture shall be used in any class of concrete without written permission from the Menifee City Engineer.
 12. The City Inspector may require drill holes and/or coring at any location and interval to determine the wall thickness of the pipe and/or the compressive strength of the concrete.



- 13. At the end of all pours and the end of each working day, the contractor shall install No. 4 dowels, 24 inches long, 12 inches on center, around the circumference of the cast-in-place pipe.
- 14. All manholes, junction structures and any other structures are to be built separate from the cast-in-place pipe per the specified details. No cast-in-place pipe shall be allowed to run through any structure, nor shall any structure be built around the cast-in-place pipe. The cast-in-place pipe is to be stopped and started at the limits of the structure. If the cast-in-place pipe is poured through any structure location, the cast-in-place pipe shall be cut and removed at that location before the structure is constructed.
- 15. Junction structures specified for reinforced concrete pipe shall be substituted with the following structures for use with cast-in-place pipe:
 - a. A specified junction structure No. 4 (RCFCD JS229) shall be replaced with either a junction structure No. 2 (RCFCD JS227) or a transition structure No. 3 (RCFCD TS303). RCFCD JS227 when used with cast-in-place pipe, shall be modified to include concrete backfill 1 foot over the cast-in-place pipe.
 - b. A specified junction structure No. 2 (RCFCD JS227) shall be replaced with a transition structure No. 3 (RCFCD JS303).

16.

Velocity (FT/SEC)	Additional Wall Thickness	Concrete Strength (LBS/SQ.In)
5	1/2	3,250
5 to 10	1	3,250
10 to 15	1-1/2	3,250
15 to 20	2	3,250



F. Signing and Striping Notes

The following general notes shall be shown on the title sheet:

1. Traffic stripes, pavement markings, and signs shall be reflectorized and in standard sizes. Striping and marking details shall match Caltrans Standard Plans. Stencils for pavement marking shall match Caltrans Standard Plans.
2. Remove conflicting stripes, pavement markings, and raised pavement markers in accordance with the plans and as approved by the Menifee City Engineer. Word or symbol pavement markings shall be removed by wet sandblasting or grinding a rectangular area obliterating the whole marking.
3. All crosswalks shall have 10 feet spacing in between the 12 inch white or yellow stripes.
4. All double yellow stripes shall have a 3 inch painted black line separating the yellow stripes.
5. All striping, pavement markings, and pavement legends shall be thermoplastic. Thermoplastic shall consist of 3M reflective elements series 50 (or approved equal) and shall allow for both wet and dry reflectivity. Thermoplastic striping shall be applied per manufacturer's recommendations.
6. Apply pavement markings including crosswalks, limit lines, turn arrow legends, and stop bars using thermoplastic material.
7. If painted striping is allowed per plans, painted traffic stripes and pavement markings shall be applied in two coats and shall be lead-free water-born paint. The second coat of paint shall be applied within 7 to 14 days after the first coat.
8. Provide raised pavement markers (RPMs) within seven working days of roadway striping or after the second coat of paint has been applied. Existing RPMs within the project area shall be replaced in kind or removed in accordance with the plans, or as approved by the Menifee City Engineer.
9. Provide blue retroreflective raised pavement markers (RPMs) on private streets, public streets, and driveways to indicate location of fire hydrants. Placement of markers shall comply with City of Menifee Standard Plan 705 and the California Manual on Uniform Traffic Control Device Figure 3B-102(CA). Obtain approval of marker placement by the Riverside County Fire Department prior to installation.
10. Square perforated steel tube posts with two piece anchor and sleeve, "Telespar", per City of Menifee Standard Plan 817 shall be used for all traffic control and informational signs within the road right-of-way.
11. The bottom of the traffic sign shall be a minimum of 7 feet above the finished surface.



12. Signs larger than 48 inches or locations where sidewalks are less than 5 feet wide, sign posts shall be installed behind the sidewalk.
13. The exact location of signs shall be approved in the field by the Menifee City Engineer.
14. Remove signs and/or relocate in accordance with the plans and as approved by the Menifee City Engineer. The Developer/Contractor shall deliver removed signs to a designated Menifee city yard or a location as approved by the Menifee City Engineer.
15. Layout (cat-track) the proposed striping and markings in accordance with the plans within three working days of final paving. Contact City of Menifee Engineering Department at (951) 672-6777 to obtain approval of layout prior to actual installation.
16. Contractor shall maintain temporary traffic striping tabs until permanent striping is installed. Temporary traffic tabs shall not remain on the pavement for more than 10 days.
17. Coordinate all signing and striping works through the City Engineer prior to opening new roadways and existing roadways to new signing and striping.
18. All arterial streets shall be posted with No Parking Entire Block signs and where applicable, R26(S)(CA) signs. Location of signs shall be approved by the City of Menifee Public Works Department.
19. Every attempt should be made to install street signs on street light standards as approved by the City of Menifee. Signs installed on Marbelite street light standards shall be in accordance with City of Menifee Standard 1202.
20. Signs shall be in standard sizes, unless noted otherwise. All sign face reflective sheeting shall be high intensity grade with protective overlay film.
21. Street name sign shall conform to City of Menifee Standard Plan No. 815 and 816.



G. Traffic Signal Plan Notes

The following general notes shall be shown on the title sheet:

1. All traffic signal design, modifications, and installations shall follow the City of Menifee Traffic Signal Specifications and Installation Guidelines.
2. Luminaires shall conform to the Menifee Street Lighting Manual.
3. These plans have been examined by the City of Menifee's Engineering Division to insure compliance with general engineering standards and the City's design standards and specifications. The Engineer-of-Work shall bear the sole responsibility of the mathematical data and accuracy of design shown hereon.
4. The Contractor shall obtain all necessary permits and notify all utilities, agencies, and the City of Menifee (951) 3672-6777 at least 48 hours in advance of construction.
5. Contractor shall submit cut sheets for City Approval of all proposed equipment prior to ordering any equipment.
6. Traffic signal construction shall not commence until all materials including poles, mast arms and controller are on-hand unless approved by the project inspector.
7. Contact City of Menifee Public Works Department at (951) 672-6777 to obtain approval of equipment locations prior to final placement.
8. Before excavating, the Contractor shall verify locations of underground facilities by contacting the Underground Service Alert at 1-800-277-2600.
9. Utility mark-outs shall be conducted using a temporary paint that can be removed by power wash, if necessary. The Contractor shall remove all mark out paint upon completion of the work.
10. The location of all existing underground utilities is approximate. The Contractor shall determine the location and depth of all utilities including those not shown on these plans. Verification of the location and depth of underground utilities and digging for foundations shall be done by hand excavation methods until clear of all underground facilities. All underground utilities shall be protected during construction and expense of repair or replacement of utilities damaged during construction shall be borne by the Contractor.
11. The Contractor shall provide all necessary traffic control devices during traffic signal installation. A traffic control plan, including the layout of construction warning and detour signs, working hours, and construction schedule shall be submitted to the Engineering Division Department for approval a minimum of five days prior to the commencement of construction. Traffic control shall be implemented before any work is started.



12. Protect or replace in kind existing improvements on public right-of-way. Contractor shall repair, at his cost, the damage caused to existing landscaping and irrigation systems during the construction of this project. Repairs shall be made within 5 working days after damage occurs.
13. Existing traffic signal facilities, signals and communications shall remain operational until new facilities are cutover or connected or as long as approved by the project inspector.
14. Existing traffic signal detector loops damaged during construction shall be replaced within three working days of date damaged.
15. Place controller cabinet and service cabinet a minimum of 15 feet apart.
16. Pole, detector and equipment locations are approximate. The City of Menifee's Public Works Department shall field verify and approve the exact equipment locations prior to installation.
17. All traffic signal/interconnect conduit and fittings (after the electric meter pedestal) shall be minimum three inch (3") Schedule 80 PVC. All conduits shall be buried to a depth of not less than 30 inches below finished grade, except in sidewalk and curbed paved median areas, where it must be at least 18 inches below grade. All conduits shall be sealed upon completion. All conduits shall be placed behind the curb or sidewalk using directional drilling or trenching methods only. Jacking will not be permitted. "Trenching in Pavement" method shall only be permitted if directional drilling or trenching is not feasible due to site constraints, as approved by the Engineer. All conduits shall contain a 3/16" pull rope.
18. Traffic signal pull boxes shall be No. 6 unless otherwise noted or approved by the Engineer. Traffic signal pull boxes in unimproved areas not protected by curb and gutter shall be traffic bearing type. Maximum spacing between pull boxes shall be 400 feet. PB lid shall be Christy's Fibrelyte lid or equivalent.
19. The ends of all conduits shall have Carlon, or approved equal bell fittings with conduit sealing compound to prevent dirt and rock from entering conduit.
20. All conduits shall contain "mule tape" pull rope per State of California Standard Specifications 86-2.05C.
21. Loop detector configurations shall be Type "E" per Caltrans Standard Plan ES-5B. All curb terminations shall be Type "A" per Caltrans Standard Plan ES-5D. Detector loops shall be placed per County of Riverside Standard Plan No. 1201 and centered within the driving lane unless otherwise noted. Contact City of Menifee Engineering Department at (951) 672-6777 to obtain approval of striping layout (Cat-Tracking) prior to detector loop installation. Test and obtain approval of detector loop wires prior to filling sawcuts.
22. All wiring and equipment shall be marked (tagged) within the controller cabinet and all pull boxes for phase identification per Menifee Specifications.



23. Cap unused tenons in a waterproof method as approved by the Menifee City Engineer.
24. Internally illuminated street name signs (IISNS) shall be LED IISNS per City of Menifee specifications.
25. The Contractor shall be responsible for service coordination with SCE.
26. The Contractor shall be responsible for the installation, relocation or replacement of all striping, signing or traffic detector loops as required by the Traffic Engineer. All signs shall conform to the California Manual of Uniform Traffic Control Devices (CAMUTCD) and City of Menifee's Signing and Striping Standards.
27. An "AS-BUILT" drawing shall be submitted for all public improvements prior to the acceptance of said improvements.



H. Street Light Notes

The following general notes shall be shown on the title sheet:

1. Street Light Design Plans for construction shall follow the latest edition of the City of Menifee Street and Safety Lighting Standard Guidelines.
2. This project shall comply with the Mt Palomar Light Pollution Ordinance No. 655.
3. These plans have been examined by the City of Menifee's engineering Division to insure compliance with general engineering standards and the City's design standards and specifications. The Engineer-of-Work shall bear the sole responsibility of the mathematical data and accuracy of design shown hereon.
4. Street light locations may be adjusted in the field a maximum of 10 feet to avoid existing obstructions such as driveways, catch basins, fire hydrants, etc. Any deviation exceeding 10 feet shall be approved in writing by the City of Menifee Engineering Department.
5. A revised street lighting plan shall be required for any changes made to the subdivision maps or design plans which affect street alignments, lot sizes, parcel sizes, boundaries, etc.
6. All revisions to improvement plans, or material substitution requests, proposed during construction shall be submitted in writing to the Engineering Department by the Engineer of Record and shall follow the procedures for approval outlined in the most current City of Menifee Engineering Department directives.
7. In order for the City of Menifee's Lighting District to assume the operations and maintenance of a lighting system on any public street, the street shall be accepted by the City and open to the general public.
8. Street Lights shall be installed behind the sidewalk, with luminaire arm oriented over the street and perpendicular to its centerline:
 - a. Arterial Streets (6 foot Sidewalk): 7'-9" from curb face to center of pole foundation
 - b. Non-Arterial Streets (6 foot Sidewalk): 7'-9" from curb face to center of pole foundation
 - c. Meandering sidewalks: 18" min. from curb face to outside edge of pole.
9. Placement
 - a. On streets where the sidewalks are 5.5 feet or less in width, excluding the top of curb, and are adjacent to the curb, the street lighting electrolier standards and pull boxes shall be placed outside the sidewalk area unless otherwise specified on the City of Menifee approved plan.



- b. On all streets, handhole/pull box shall be placed “in-line” with street lighting standard and shall not be placed in front of or behind standards on sidewalks within the path of travel.
10. There shall be no above-ground obstructions in any portion of the sidewalk (where the width, exclusive of top of curb, is 5.5 feet or less). Where power/telephone/cable poles, street light standards, fire hydrants, and control boxes occur in the 5.5 foot sidewalk, the sidewalk shall be modified per City of Menifee Standard Plan No. 402.
11. All mast arms and brackets shall be perpendicular to the curb face and 8 feet long unless otherwise specified on the City of Menifee approved plan.
12. All lights shown on this plan shall be installed and operational prior to the acceptance of the system into the City of Menifee’s Lighting District.
13. All street wiring and appurtenant apparatus shall be undergrounded.
14. Street lights shall be constructed per the City of Menifee approved plan. Lights not constructed according to the approved plan shall be removed and relocated at no expense to the City of Menifee.
15. Street Lights shall be erected such that the base door is perpendicular to the curb and located on the side of the Street Light facing oncoming traffic.
16. All equipment required hereon for furnishing electrical service, for each circuit, shall be installed and inspected prior to any other construction on that circuit.
17. The Contractor shall give written notice, 72 hours in advance of removal of a Street Light, to any public agency maintaining equipment supported by the Street Light.
18. Foundations and pull boxes not remaining in service shall be removed. The resulting excavation shall be filled with material similar to adjacent material and satisfactorily compacted with a mechanical compactor in layers not exceeding 12 inches. The surface shall be finished to match the adjacent surface.
19. All pull boxes shall be No. 5. All street lighting pull box lids shall read “STREET LIGHTING”. Pull boxes located adjacent to driveways and alleys shall be installed at a minimum distance of 5 feet from the top of the driveway “X” or 5 feet from the travel way of the alley.
20. Pull boxes installed at intersections of local streets shall be installed no closer to the intersections than the B.C.R. of an assumed future 35 foot radius curb return.
21. **WARNING:** Safety clearance shall be obtained daily from the affected utility company before doing any work in close proximity to any overhead electric line.
22. Contractor shall be responsible for preserving the condition of all existing equipment to be reused, modified or returned to the City of Menifee Public Works Department.



23. Equipment indicated "Dispose" shall become the property of the Contractor and be properly disposed off-site by the Contractor.
24. Contractor shall repair, at his cost, the damage caused to existing landscaping and irrigation systems during the construction of this project. Repairs shall be made within 5 working days after damage occurs.
25. Contractor shall locate and protect substructure(s) shown hereon and shall provide for a minimum 12 inch horizontal clearance between foundation and substructures. In the event a 12 inch clearance cannot be achieved, the Contractor shall make arrangements for relocation of substructures with the City.
26. In the event of overhead lines conflict with Street Lights the Contractor shall make necessary arrangements with Southern California Edison to raise their overhead facilities in order to provide for the following clearances with existing and/or proposed Street Lights:
 - a. Low Voltage: Minimum 3 foot clearance between overhead lines and Street Lights.
 - b. High Voltage: Minimum 6 foot clearance between overhead lines and Street Lights
27. In the event of overhead communication line conflict with Street Lights, Contractor shall make necessary arrangements to provide a minimum 12 inch clearance.
28. Proposed Street Light foundations and pullboxes shall be installed outside of access ramp areas. Existing foundations and pullboxes shall be reconstructed to clear access ramps by a minimum of 12 inches.
29. Conduit that is to be abandoned shall have wires removed. The conduit shall be removed to a depth of at least 12 inches below the surface and have both ends crimped or capped.
30. Electrical systems for LS-3 rate schedule street lights shall comply with Section 700 latest edition of the Greenbook and the 2013 California Electrical Code/2011 National Electrical Code.
31. Proposed LS-3 rate schedule street light foundations, pedestals, pullboxes and other associated LS-3 street light system appurtenances shall be installed within the City right-of-way.
32. Street lighting standards for LS-3 rate schedule street lights shall be concrete Ameron or approved equal per City of Menifee Street and Safety Lighting Guidelines.
33. Proposed LS-3 rate schedule concrete streetlight foundations shall be in accordance with City of Menifee Standard Plan 1003.
34. As-built plans and asset/attribute data shall be submitted to the City prior to acceptance of improvements.
35. All new conduits shall be 2" PVC Schedule 80 unless shown otherwise on plans.



- 36. Lighting shall be maintained throughout project.
- 37. Lighting calculations are required to verify appropriate lighting levels.
- 38. Service to all existing lighting shall be maintained at all times.
- 39. Contractor shall furnish and install street lighting standard and light fixture as specified unless otherwise shown on plans.
- 40. SCE Service planner _____,
Work order number (TD and/or PI No.) _____



I. Traffic Control Notes

The following general notes shall be shown on the title sheet:

1. All traffic control work for construction shall conform to the latest edition of:
 - a. California Manual on Uniform Traffic Control Devices (CAMUTCD)
 - b. City of Menifee Specifications and Requirements
 - c. State of California Department of Transportation (Caltrans) Standard Plans and Specifications
 - d. All O.S.H.A. Requirements
2. All temporary signing and striping shall conform to the latest Caltrans Standard Plans and Specifications, California Manual on Uniform Traffic Control Devices (CMUTCD), and the City of Menifee's latest Signing and Striping General Notes.
3. No work shall begin before 9:00 AM or continue after 3:00 PM on Arterial Streets. The only exception is when traffic control plans have been approved in advance for 24-hour lane closures. In this case, the Contractor can only work behind the traffic control devices within the approved 24-hour lane closure period. Contractor shall obtain approval from the City of Menifee for actual hours.
4. No work is permitted on Sundays or holidays unless approved otherwise by the City of Menifee.
5. During non-working hours or when work is not scheduled, all roadway lanes shall be returned to their full traffic usage on the same day by steel plating or backfilling the open trenches, and Contractor shall remove from the public right-of-way all traffic control devices used for traffic control or detour. The only exception is when traffic control plans have been approved for 24-hour lane closure. In this case, the Contractor shall maintain all traffic control devices used for traffic control or detours during the approved 24-hour lane closures.
6. Contractor shall maintain at least one access point to all adjacent properties and fire hydrants.
7. All signs shall be reflectorized and standard size. Temporary construction signs shall have black lettering/symbols on orange background unless shown otherwise.
8. Contractor shall have all signs, delineators, barricades, k-rail, etc., properly installed prior to commencing construction and shall provide safe and continuous passage of pedestrian, bicyclist, and vehicular traffic at all times. All conflicting signs shall be covered or removed.
9. Contractor shall be responsible for the placement of any additional traffic control devices required by the City to assure safety to the public at all times during construction. Exact location and type of construction signs shall be as directed by Engineer based on construction condition. The City of Menifee or its representative has the authority to initiate field changes to assure public safety.



10. Remove all conflicting striping, markings and raised pavement markers, striping shall be removed by wet sandblasting or other approved methods prior to any restriping. The Contractor shall restore any and all striping, pavement markings, and traffic signal loops damaged, or removed, during construction to the satisfaction of the City Engineer.
11. The Contractor shall telephone the City of Menifee Engineering Department at (951)6777, at least two working days (48 hours) prior to the starting traffic control setup.
12. Changeable message sign boards shall be used in advanced of all lane closures and roadway closures on collector and arterial streets.
13. Contractor shall maintain two-way traffic during construction.
14. Contractor shall replace any traffic signal loops damaged within 72 hours.
15. It is the responsibility of the Contractor performing work on a public street to install and maintain control devices, as well as any such additional devices as may be required to insure the safe movement of traffic, bicyclists, and pedestrians through or around the work area. All traffic control devices shall be kept in their proper position at all times, and shall be repaired, replaced or cleaned as necessary to preserve their appearance and continuity.
16. A minimum 5 feet of clearance shall be maintained between any open excavation and the nearest adjacent moving traffic lane. No open trench adjacent to a traffic lane shall exceed 300 feet. Temporary concrete barrier (Type K per Caltrans Standard Plan T-3) shall be used whenever shown on the plans. The C27 (CA) "Open Trench" sign shall be utilized whenever an open excavation area exist adjacent to the travel way.
17. Lane closures shall be as shown on the traffic control plans or as directed by Menifee City Engineer. Single lane closure traffic control devices shall conform to Caltrans Standard Plan No. T11.
18. Pavement removal, reconstruction, and pavement overlay outside construction areas shown on the plans shall be by single lane closure as directed by Menifee City Engineer.
19. A traffic control permit must be obtained by the Contractor at least 48 hours prior to beginning work.
20. Use and placement of flashing arrow board sign(s) shall be as shown on the plans and as directed by Menifee City Engineer. All traffic transitions shall utilize flashing arrow boards. Flashing arrow boards shall be used on any lane closures.



21. Flashing beacons and/or warning lights shall be used on W20-1 Signs, on all Type III barricades guarding the work area overnight, and where directed by Menifee City Engineer.
22. Contractor shall comply with the requirements of the American Disability Act (ADA) as related to pedestrian access and shall maintain pedestrian access at all times per ADA requirements. Sidewalk, bike lanes, and bike trails closures/detours shall be approved by Menifee City Engineer.
23. Contractor shall install "Steel Plates Ahead" signs in advance of steel bridging. "Uneven Lanes (Symbol)" signs shall be posted in advance of pavement surface disruptions OD 1/2" or greater. Pavement disruptions of 1" or greater shall have beveled edge of 4 (horizontal) to 1 (vertical).
24. Contractor shall maintain signal operation at all times. Contractor shall coordinate with the City of Menifee Public Works Department for signal operations during construction and final signal improvements.
25. Contractor shall provide traffic control plans for pavement reconstruction, pavement overlay, and for work not shown on these plans.
26. Actual field conditions may require some deviation from the plans and notes, however, any such deviations shall be approved by the City of Menifee Public Works Department at least 72 hours prior to implementation.
27. All advance warning signs shall be equipped with two orange flags.
28. All advance warning signs shall be a minimum of 36" x 36".
29. Daytime channelization devices may consist of either:
 - a. 28" minimum height cones, or
 - b. 36" minimum height tubes, or
 - c. Type one barricades.
30. All lane closures and detours that are scheduled to remain over one week shall be striped and all conflicting stripes shall be completely removed by wet sandblasting (black paint shall not be used).
31. The following are additional requirements for all night time lane closures and detours:
 - a. At least one person shall be assigned full-time to maintain traffic control devices, and
 - b. All traffic signs shall be reflectorized, and
 - c. Type A or B (flashing) yellow flashing beacon warning lights shall be used at all warning signs.
 - d. All channelization devices shall be either:
Internally illuminated cones fitted with 7" reflective with sleeves, or
Type 1 barricades with Type C (steady burn) yellow barricade warning lights.



32. The following are additional requirements on all roads having a posted speed limit of 45 MPH or greater:
 - a. All advance warning signs should be a minimum of 48" x 48", and
 - b. Type 1 or 2 flashing arrow signs (FAS) shall be used on all lane closures.
33. No trenches shall be left open overnight without the express written permission of Menifee City Engineer. Trenches shall be backfilled or plated per City of Menifee Standard Plan No. 812 and 813
34. Access shall be maintained at all times to all intersecting streets & driveways, except as shown.
35. Contractor shall coordinate with the City of Menifee at (951) 672-6777 a minimum of five (5) working days prior to work affecting any traffic signal within construction area. Contact City of Menifee Public Works Department for traffic signal operational changes when traffic loops are damaged, or for traffic control conditions noted on the plans.
36. Contractor shall maintain existing signal operation at all times. Contractor shall replace loop detectors at all locations where the existing loop detectors are not in the center of the lane. Contractor may use video detection during construction upon written approval by Menifee City Engineer.
37. Any damages to the traffic signal interconnect conduit, interconnect cable, or detection loop system during operations of the approved permit shall be replaced within 72 hours to the satisfaction of Menifee City Engineer.



J. Water Notes

The following general notes shall be shown on the title sheet:

1. Specification and construction notes required by the Eastern Municipal Water District (EMWD).
2. Materials, testing and inspection of pipe shall be in conformity with the requirements of the City of Menifee, the American Water Works Association (AWWA), and EMWD standards.
3. Type of pipe used.
4. Failure to meet any of the requirements of the City of Menifee, the AWWA specifications and EMWD will be cause for rejection.
5. Separation requirements between water and sewer lines shall conform to State Health Code Standard.
6. Index map with sheet layout and numbering.
7. Trench repair per City of Menifee Standard No. 812

B. Profile Notes

At the direction of the water district, profile for water lines may be required or may be omitted. If they are omitted, a general note should be added to all water plans, stating

"Normal minimum cover shall be 3.0".

C. Fire Department Approval Block

On title sheet of water plans, provide the following block, if fire hydrants are proposed:

<p>RIVERSIDE COUNTY</p> <p>FIRE DEPARTMENT</p> <p>APPROVED BY: _____</p> <p>DATE: _____</p>



K. Sewer Notes

The following general notes shall be shown on the title sheet:

1. Specification and construction notes required by Sewer District.
2. Materials, testing and inspection of pipe shall be in conformity with the requirements of the City of Menifee, the Riverside County Standards and Specifications Ordinance 461, and the Eastern Municipal Water District (EMWD).
3. Type of sewer pipe used.
4. Failure to meet any of the requirements of the City of Menifee, the Riverside County Standards and Specifications Ordinance 461, and EMWD will be cause for rejection.
5. Separation requirements between sewer and water lines shall conform to State Health Code Standards.
6. Sewer laterals shall be installed according to Riverside County Standards No. 600 and 601 or EMWD.
7. Index map with sheet layout and numbers.
8. Refer to City of Menifee Standard 812 for trench repair.