4. Stormwater Pollution Prevention Plan (SWPPP) (Section XIV of the General Permit)
5. Annual Fee
6. Signed Certification Statement

Notice of Intent - The District will complete and submit the Notice of Intent.

Risk Assessment - Using the methodology in Appendix 1 of the General Permit, the District has calculated the preliminary Risk Level to be 1.

Site Map – The Contractor shall revise District provided site map of the project area if Contractor's Qualified SWPPP Developer (QSD) deems necessary. Site Map shall conform to requirements of General Permit Attachment B, Section J.

SWPPP – For the convenience of the Contractor and to expedite the SWPPP preparation and approval, a "90%" SWPPP Template has been prepared by the District. This SWPPP Template has been tailored to the referenced project and can be downloaded from http://rcflood.org/Documents/SWPPP_Template_5000177.pdf or obtained from the District in CD form. Winning bidder will be provided two (2) hard copies and a Word document of the "90%" SWPPP Template to amend. The Contractor shall review and amend this SWPPP Template based on the requirements of the General Permit and per the construction schedule and work plan proposed by the Contractor. The Contractor shall then submit a SWPPP certified by the Contractor's QSD which conforms to Section 29.3 for District review and approval.

The Contractor shall amend and finalize the complete "90%" SWPPP Template referenced above. The Contractor shall, at a minimum, provide and/or prepare the following:

1. Name and contact information for the Contractor's Qualified SWPPP Practitioner (QSP) and QSD
2. Contractor name and contact information
3. Contractor site contact person and emergency contact person information
4. Verification of disturbance area due to construction
5. Construction commencement date
6. Anticipated construction completion date
7. Construction Activity Schedule/Best Management Practices (BMPs) Installation Schedule
8. Name and contact information for personnel responsible for pre-storm, post-storm and storm event BMP inspections – this should be the project's QSP
9. Name of the lab responsible for testing any stormwater samples for non-visible pollutants
10. Verification of project risk level and permit type (Linear Underground/Overhead Project (LUP) or Traditional)
11. List of all subcontractors that will be working on the project
12. Review and finalize water pollution control drawings

The SWPPP shall be certified by the Contractor's QSD and implemented by the Contractor's QSP. The SWPPP shall be developed using the format outlined in the CASQA SWPPP Template located in the California Stormwater Quality Association (CASQA) Construction BMP Handbook Portal. The portal can be found on the CASQA Website: www.casqa.org. The SWPPP shall identify site specific BMPs to be implemented during and after construction to minimize the potential pollution of stormwater runoff and downstream receiving waters. The identified BMPs shall be practices designed to minimize or eliminate the discharge of pollutants from the construction site and Contractor's construction activities, including, but not limited to:

1. Good housekeeping practices for solid and sanitary/septic waste management, vehicle and equipment cleaning/maintenance, and material handling and storage.

2. Construction procedures such as stabilized construction access points, scheduling/phasing to minimize areas of soil disturbance, soil stabilization and erosion/sediment control.

The SWPPP shall also stipulate an ongoing program for monitoring and maintenance of all BMPs.

The SWPPP shall be designed to address the following objectives:

1. All pollutants and their sources, including sources of sediment associated with construction, construction site erosion and all other activities associated with construction activity are controlled;
2. Where not otherwise required to be under a Regional Water Board permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
3. Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Conventional Technology (BAT/BCT) standard;
4. Calculations and design details as well as BMP controls for site run-on are complete and correct; and
5. Stabilization BMPs, installed to reduce or eliminate pollutants after construction, are completed.

To demonstrate compliance with requirements of the General Permit, the QSD shall include information in the SWPPP that supports the conclusions, selections, use, and maintenance of BMPs.

The Contractor shall make the SWPPP available at the construction site during working hours while construction is occurring and shall be made available upon request by a State or Regional Board inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and

map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone.

Annual Fee – The District will pay any necessary fees.

Signed Certification Statement – The Contractor's QSD shall submit a signed certification certifying the SWPPP is a true, accurate and complete representation of the proposed project and mitigation measures.

In the event the District incurs any Administrative Civil Liability or Mandatory Minimum Penalty (fine) imposed by the CRWQCB – Colorado River Basin Region, as a result of Contractor's failure to fully implement the provisions of this section and permit requirements, "Stormwater and Non-Stormwater Pollution Control", the Engineer may, in the exercise of his sole judgment and discretion, withhold from payments otherwise due Contractor a sufficient amount to cover the Civil Liability. Liability for "Negligent Violations" may be in an amount up to $50,000 per day per deemed occurrence while "Knowing Violations" can result in fines as high as $250,000 and imprisonment.

Stormwater and Non-Stormwater Pollution Control work shall conform to the requirements in the latest version of the California Stormwater Quality Association (CASQA) Handbook, entitled **"California Stormwater BMP Handbook – Construction"**. A copy of the "California Stormwater BMP Handbook – Construction", hereafter referred to as the "CASQA Handbook", may be obtained from CASQA, Post Office Box 2105, Menlo Park, California 94026-2105. Telephone: 650.366.1042. Copies of the handbook can also be downloaded from the CASQA Internet site at https://www.casqa.org/.

The Contractor shall be responsible for all costs and for any liability imposed by law as a result of the Contractor's failure to comply with the requirements set forth in this section, "Stormwater and Non-Stormwater Pollution Control", including but not limited to, compliance with the applicable provisions of the CASQA Handbook, General Permit, Federal, State and local regulations. For the purpose of this paragraph, costs and liabilities include, but are not limited to, fines, penalties and damages whether assessed against the District or the Contractor, including those levied under the Federal Clean Water Act and the State Porter-Cologne Water Quality Act.

The Contractor shall become fully informed of and comply with the applicable provisions of the CASQA Handbook, General Permit, Federal, State and local regulations that govern the Contractor's activities and operation pertaining to both stormwater and non-stormwater discharges from both the project site and areas of disturbance outside the project limits during construction. The Contractor shall, at all times, keep copies of the General Permit, approved SWPPP and all amendments at the project site. The SWPPP shall be made available upon request of a representative of the SWRCB, CRWQCB, United States Environmental Protection Agency (USEPA) or local stormwater management agency. Requests by the public shall be directed to the Engineer.

The Contractor is solely and exclusively responsible for any arrangements made between the Contractor and other property owners or entities that result in disturbance of areas or construction activities being conducted outside limits of the designated rights-of-way and temporary construction easements as shown on the project drawings.

The Contractor shall, at reasonable times, allow authorized agents of the CRWQCB, SWRCB, USEPA or local stormwater management agency, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the construction site and the Contractor's facilities pertinent to the work;
2. Have access to and copy any records required to be kept as specified in the General Permit;
3. Inspect the construction site, including any offsite staging areas or material storage areas, and related soil stabilization practices and sediment control BMPs; and
4. Sample or monitor for the purpose of ensuring compliance with the General Permit.

The Contractor shall notify the Engineer immediately upon request from regulatory agencies to enter, inspect, sample, monitor or otherwise access the project site or the Contractor's records.

29.3 PRDs Preparation and Approval - The Contractor shall prepare and obtain approval of the PRDs as part of the Stormwater and Non-Stormwater Pollution Control work for this contract. The SWPPP shall include an appropriate Construction Site Monitoring Program (CSMP) as required by Section I, "Monitoring and Reporting Requirements" of Attachment C of the General Permit. A guidance document titled "Field Monitoring and Analysis Guidance" is available from the CASQA internet site in their Construction BMP Handbook Portal. The Contractor shall prepare and implement the SWPPP in accordance with the CASQA Handbook and CSMP, the General Permit and these Detailed Specifications.

In case of conflict between the CASQA Handbook and these Detailed Specifications, the Detailed Specifications shall govern; in case of conflict between these Detailed Specifications and the General Permit, the latter shall govern.

Within five (5) working days after the award of the contract, the Contractor shall submit two (2) copies of the SWPPP to the Engineer for review and approval. The Contractor shall allow ten (10) working days for the Engineer to review the SWPPP. If revisions are required as determined by the Engineer, the Contractor shall revise and resubmit the SWPPP within three (3) working days of receipt of the Engineer's comments and shall allow ten (10) working days for the Engineer to review the revisions. The Contractor shall submit four (4) copies of the approved SWPPP to the Engineer prior to the pre-construction meeting. **The Contractor must have an approved PRDs prior to the pre-construction meeting.**

The objectives of the SWPPP shall be to identify all pollution sources associated with Contractor's construction activities that may adversely affect the quality of stormwater discharges; to identify all non-stormwater discharges; to identify, construct, implement and maintain water pollution control best management practices, hereafter referred to as "BMPs", to reduce to the maximum extent practicable pollutants in both stormwater discharges and authorized non-stormwater discharges from the construction site during construction and to develop a maintenance schedule for BMPs after construction is completed under this contract.

The SWPPP shall incorporate BMPs in each of the following categories:

1. Soil stabilization practices;
2. Sediment control practices;
3. Sediment tracking control practices;
4. Wind erosion control practices; and
5. Non-stormwater management, and waste management and disposal control practices.

Specific objectives and minimum requirements for each category of BMPs are described in the CASQA Handbook. The Contractor shall consider the objectives and minimum requirements presented in the CASQA Handbook for each of the above categories. When minimum requirements are listed for any category, the Contractor shall incorporate one or more of the listed minimum BMPs required into the SWPPP and implement them on the project to meet the pollution control objectives for the category. In addition, the Contractor shall consider other BMPs presented in the CASQA Handbook to supplement the minimum BMPs required when necessary to meet the objectives of the SWPPP and maintain compliance with the General Permit. The Contractor shall document the selection process in accordance with the procedure specified in the CASQA Handbook.

The Contractor should not assume that the minimum BMPs required for each category presented in the CASQA Handbook are adequate to meet the pollution control objectives. The Contractor may use other effective BMPs, as approved by the Engineer, in addition to the minimum as required in the CASQA Handbook to achieve the pollution control objectives.

The SWPPP shall include the following items as described in the CASQA Handbook, CSMP and General Permit:

Section 1 - SWPPP Requirements:

1.1 Introduction
1.2 PRDs
1.3 SWPPP Availability and Implementation
1.4 SWPPP Amendments
1.5 Retention of Records
1.6 Required Non-Compliance Reporting
1.7 Annual Report

1.8 Changes to Permit Coverage
1.9 Notice of Termination

Section 2 - Project Information:

2.1 Project and Site Description
2.2 Permits and Governing Documents
2.3 Stormwater Run-on from Offsite Areas
2.4 Findings of the Construction Site Sediment and Receiving Water Risk Determination
2.5 Construction Schedule
2.6 Potential Construction Site Pollutant Sources
2.7 Identification of Non-Stormwater Discharges
2.8 Required Site Map Information

Section 3 - Best Management Practices:

3.1 Schedule for BMP Implementation
3.2 Erosion Control and Sediment Control
3.3 Non-Stormwater and Material Management
3.4 Post-Construction Stormwater Management Measures

Section 4 - BMP Inspection, Maintenance, and Rain Event Action Plans:

4.1 BMP Inspection and Maintenance
4.2 Rain Event Action Plans

Section 5 - Training

Section 6 - Responsible Parties and Operators:

6.1 Responsible Parties
6.2 Contractor List

Section 7 - Construction Site Monitoring Program:

7.1 Purpose
7.2 Applicability of Permit Requirements
7.3 Weather and Rain Event Tracking
7.4 Monitoring Locations
7.5 Safety and Monitoring Exemptions
7.6 Visual Monitoring (Inspections)
7.7 Water Quality Sampling and Analysis
7.8 Watershed Monitoring Option
7.9 Quality Assurance and Quality Control
7.10 Reporting Requirements and Records Retention

To ensure that the preparation, implementation, and oversight of the SWPPP is sufficient for effective pollution prevention, individuals responsible for creating, revising, overseeing, and implementing the SWPPP should participate in applicable training programs and document such training in the SWPPP. A copy of the SWPPP should be located at the construction site.

The following notes (or notes of substantially similar intent) that address pollution prevention to the Maximum Extent Practicable during the construction phase of a project on a year-round basis need to be placed on the Stormwater and Non-Stormwater Pollution Control Drawings:

- Erosion control BMPs shall be implemented and maintained to minimize and/or prevent the entrainment of soil in runoff from disturbed soil areas on construction sites.
- Sediment control BMPs shall be implemented and maintained to prevent and/or minimize the transport of soil from the construction site.
- Stockpiles of soil shall be properly contained to eliminate or reduce sediment transport from the site to streets, drainage facilities or adjacent properties via runoff, vehicle tracking or wind.
- Appropriate BMPs for construction-related materials, wastes, spills or residues shall be implemented to eliminate or reduce transport from the site to streets, drainage facilities or adjoining properties by wind or runoff.
- Runoff from equipment and vehicle washing shall be contained at construction sites and must not be discharged to receiving waters or the local storm drain system. Washwaters or rinsate from ready mix, concrete, or cement vehicles must be handled appropriately and may not be discharged to receiving waters or any storm drain system.
- All construction contractor and subcontractor personnel are to be made aware of the required best management practices and good housekeeping measures for the project site and any associated construction staging areas.
- At the end of each day of construction activity all construction debris and waste materials shall be collected and properly disposed in trash or recycle bins.
- Construction sites shall be maintained in such a condition that a storm does not carry wastes or pollutants off the site. Discharges other than stormwater (non-stormwater discharges) are prohibited, except as authorized by an individual NPDES permit or the State-wide General Permit for Storm Water Discharges Associated with Construction Activity. Potential pollutants include but are not limited to: solid or liquid chemical spills; wastes from paints, stains, sealants, solvents, detergents, glues, lime, pesticides, herbicides, fertilizers, wood preservatives and asbestos fibers; paint flakes or stucco fragments; fuels, oils, lubricants and hydraulic, radiator or battery fluids; concrete and related cutting or curing residues; floatable wastes; wastes from engine/equipment steam cleaning or chemical degreasing; wastes from street cleaning; and super-chlorinated potable water from line flushing and testing. During construction, disposal of such materials should occur in a specified and controlled temporary area onsite

physically separated from potential stormwater runoff, with ultimate disposal in accordance with local, State and Federal requirements.

- Discharging contaminated groundwater produced by dewatering groundwater that has infiltrated into the construction site is prohibited. Discharging of contaminated soils via surface erosion is also prohibited.
- The Contractor is required to notify and obtain approval from the District ten (10) days prior to any non-stormwater discharge or dewatering associated with Contractor's construction activities.
- Construction sites shall be managed to minimize the exposure time of disturbed soil areas through phasing and scheduling of grading to the extent feasible and the use of temporary and permanent soil stabilization.
- BMPs shall be maintained at all times. In addition, BMPs shall be inspected prior to predicted storm events and following storm events.

29.4 PRD and Rain Event Action Plan (REAP) Amendments - If the scope or schedule of the project changes, the Contractor shall immediately notify the Engineer. The Engineer will determine if the Contractor will be required to recalculate the Risk Assessment. If it is determined by the Engineer that a new Risk Assessment is required, the Engineer will notify the Contractor to resubmit amended PRDs and in the case that the risk level increases, the Contractor shall comply with additional applicable requirements of the General Permit, including preparation and implementation of REAPs, CSMP, Numeric Action Level (NAL) Exceedance Reports, and annual reporting requirements. The Contractor shall also prepare amendments to the PRDs, both graphically and in narrative form, whenever there is a change in Contractor's construction activities or operations which may result in the discharge of pollutants to surface waters, groundwaters, municipal storm drain systems, or as deemed necessary by the Engineer. The Contractor shall also amend the PRDs if they are in violation of any condition of the General Permit, or has not effectively achieved the objective of reducing pollutants in stormwater discharges. Amendments shall show additional BMPs, revised Contractor's construction activities or operations, including those in areas not shown in the initially approved SWPPP, which are required on the project to effectively control water pollution.

Amendments to the PRDs shall be submitted for review and approval by the Engineer in the same manner specified for the initial approval of the PRDs. The Contractor shall date and attach all approved amendments to any of the PRDs. Upon approval of the amendment, the Contractor shall implement the approved changes, revised construction activities or operations.

29.5 Non-Compliance Reporting - If the project is in non-compliance at any time, the Contractor shall make a written report to the Engineer within two (2) calendar days of identification of non-compliance activities.

29.6 SWPPP Implementation - Upon approval of the SWPPP, the Contractor shall be responsible throughout the duration of the project for placing, installing, constructing, inspecting and maintaining the BMPs as well as conducting the CSMP as included in the SWPPP and any amendments thereto, and for removing and disposing of temporary BMPs. All SWPPP implementation shall be performed or supervised by a QSP. Unless otherwise directed by the Engineer or specified in these Detailed Specifications, the Contractor's responsibility for SWPPP

implementation shall continue throughout any temporary suspension of work ordered in accordance with Section 6.05, "TEMPORARY SUSPENSION OF THE WORK", of the General Provisions. Requirements for installation, construction, inspection, maintenance, removal and disposal of BMPs are specified in the CASQA Construction BMP Handbook Portal and these Detailed Specifications.

The Engineer may order the suspension of construction operations if the Contractor fails to comply with the requirements of this section, "Stormwater and Non-Stormwater Pollution Control", as determined by the Engineer.

The Contractor will not be compensated for sampling and analysis work because of the Contractor's failure to properly implement, inspect, maintain and repair BMPs in the approved SWPPP and any amendments thereto, or for failing to store construction materials or wastes in watertight containers.

(a) Stormwater Pollution Control - **The Contractor shall implement soil stabilization practices and sediment control BMPs, including minimum requirements as presented in the Caltrans Handbooks, on all disturbed areas of the project site throughout the rainy season, defined as between August 1 - October 1 and November 1 - May 1, which is consistent with Caltrans' definition of the rainy season for the eastern desert region.**

Implementation of soil stabilization practices and sediment control BMPs for soil-disturbed areas, including but not limited to, rough graded access roads, slopes, channel inverts, operational inlets and outlets of the project shall be completed no later than ten (10) calendar days prior to the start of the rainy season or upon start of applicable Contractor's construction activities for projects which begin either during or within ten (10) calendar days of the rainy season.

The Engineer may require the Contractor, on a case-by-case basis, to reduce the active, soil-disturbed area limit of the project. The Contractor shall demonstrate the ability and preparedness to fully deploy soil stabilization practices and sediment control BMPs to protect soil-disturbed areas of the project site by maintaining an adequate quantity of soil stabilization and sediment control materials onsite to protect exposed, soil-disturbed areas and a detailed plan for the mobilization of sufficient labor and equipment to fully deploy the required BMPs prior to the onset of precipitation and for the duration of the project.

Throughout the rainy season, soil-disturbed areas of the project site shall be considered to be nonactive whenever soil disturbing activities are expected to be discontinued for a period of fourteen (14) calendar days or more. Areas that will become nonactive either during the rainy season or within ten (10) calendar days thereof shall be fully protected with soil stabilization practices such as covering with mulch, temporary seeding, fiber rolls, blankets, etc., within ten (10) calendar days of the discontinuance of soil disturbing activities or prior to the onset of precipitation, whichever is first to occur. Areas that will become

nonactive either during the rainy season or within ten (10) calendar days thereof shall be fully protected with sediment control BMPs within ten (10) calendar days of the discontinuance of soil disturbing activities or prior to the onset of precipitation, whichever is first to occur.

Throughout the rainy season, active soil-disturbed areas of the project site shall be fully protected at the end of each day with soil stabilization practices and sediment control BMPs. The Contractor shall monitor the weather forecast on a daily basis. The National Weather Service forecast shall be used, or an alternative weather forecast proposed by the Contractor may be used if approved by the Engineer. If precipitation is predicted prior to the end of the following workday, construction scheduling shall be modified, as required, and the Contractor shall deploy functioning BMPs prior to the onset of the precipitation.

(b) Non-Stormwater Pollution Control - **The Contractor shall implement, year-round and throughout the duration of the project, BMPs included in the SWPPP for sediment tracking, wind erosion, non-stormwater management, and waste management and disposal.**

(c) Inspections and Reporting - The Contractor shall regularly inspect the construction site for BMPs identified in the SWPPP to ensure the proper implementation and functioning of BMPs. The Contractor shall identify corrective actions and time frames to address any damaged BMPs or reinitiate any BMPs that have been discontinued.

At a minimum, the Contractor shall inspect the construction site as follows:

1. Prior to a forecast storm;
2. After any precipitation which causes runoff capable of carrying sediment from the construction site;
3. At 24 hour intervals during extended precipitation events; and
4. At a regular interval of once every 2 weeks.

The construction site inspection checklist provided in the Caltrans Handbooks shall be used to ensure that the necessary BMPs are being properly implemented and are functioning adequately. The Contractor shall submit one copy of each site inspection record to the Engineer.

(d) Maintenance - The Contractor shall maintain construction site BMPs identified in the SWPPP to ensure the proper implementation and functioning of BMPs. If the Contractor or the Engineer identifies a deficiency in the deployment or functioning of an identified BMP, the deficiency shall be corrected by the Contractor immediately, or by a later date and time if requested by the Contractor and approved by the Engineer in writing, but not later than the onset of

subsequent precipitation events. The correction of deficiencies shall be at no additional cost to the District.

(e) Training - The Contractor shall ensure that all persons responsible for implementing requirements of the General Permit shall be appropriately trained in accordance with Section VII "Training Qualifications and Certification Requirements" of the General Permit. Training should be both formal and informal, occur on an ongoing basis, and should include training offered by recognized governmental agencies or professional organizations. All training shall be documented and included in the SWPPP as an appendix.

The Contractor shall ensure that SWPPPs are written, amended and certified by a QSD. The Contractor shall also ensure that all inspection, maintenance, repair and sampling activities shall be performed or supervised by a QSP. A QSP is a person responsible for non-stormwater and stormwater visual observations, sampling and analysis.

29.7 REAP - **The REAP is applicable to Risk Level 2 construction sites only.** The Contractor shall ensure a QSP develop a REAP and submit a copy to the Engineer for review 48 hours prior to any likely precipitation event. The Contractor shall amend and implement the REAP as directed by the Engineer. If no comments are received prior to the precipitation event, the REAP shall be implemented as proposed. A likely precipitation event is any weather pattern that is forecast to have a 50% or greater probability of producing precipitation in the project area. The discharger shall ensure a QSP obtain a printed copy of the precipitation forecast information from the National Weather Service Forecast Office (e.g., enter the zip code of the project's location at http://www.srh.noaa.gov/forecast).

The Contractor's QSP shall ensure that the REAP include, at a minimum, the following site information:

a. Site Address

b. Calculated Risk Level

c. Site Stormwater Manager information including the name, company and 24-hour emergency telephone number

d. Erosion and Sediment Control Provider information including the name, company and 24-hour emergency telephone number

e. Stormwater Sampling Agent information including the name, company and 24-hour emergency telephone number

29.8 Water Quality Monitoring, Sampling and Analysis - **The Water Quality Monitoring, Sampling and Analysis is applicable to Risk Level 2 construction sites only.** The Contractor's QSD shall be responsible for preparing a CSMP and implementing the monitoring,

sampling and analysis requirements as described in Attachment D of the General Permit. Records of all visual observations and sampling results required by the General Permit shall be kept using the forms contained in CSMP, Attachment 3 of the CASQA Construction BMP Handbook Portal. Copies of the forms shall be maintained in the SWPPP and submitted to the Engineer within 24 hours of the visual observation or sampling event.

29.9 NAL Exceedance Report - **The NAL Exceedance Report is applicable to Risk Level 2 construction sites only.** The Contractor shall be responsible for submitting a NAL Exceedance Report to the Engineer in the event that any effluent sample exceeds an applicable NAL.

a. The Contractor shall submit all storm event sampling results for each discharge point to the Engineer no later than 24 hours after the conclusion of the storm event.

b. The Contractor shall certify each NAL Exceedance Report in accordance with the Special Provisions for Construction Activity.

c. The Contractor shall retain an electronic or paper copy of each NAL Exceedance Report for a minimum of three (3) years after the date the annual report is filed.

d. The Contractor shall include in the NAL Exceedance Report:

    i. The analytical method(s), method reporting unit(s) and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit").

    ii. The date, place, time of sampling, visual observation (inspections) and/or measurements, including precipitation.

    iii. A description of the current BMPs associated with the effluent sample that exceeded the NAL and the proposed corrective actions taken.

29.10 Non-Stormwater Discharge or Dewatering - **Dewatering activity should only be considered after other methods have been determined to be inadequate for storm drain construction by the Engineer.** If groundwater will be encountered during the project activities, the dewatering activity must be covered by the General Waste Discharge Requirements for Low Threat Discharges to Surface Waters within the Colorado River Basin Region (De Minimus Permit), Colorado River Basin Regional Water Quality Control Board Order No. R7-2015-0006. The Contractor shall comply with this Order, and notify and obtain approval from the Engineer fifteen (15) days prior to any non-stormwater discharging of groundwater dewatering. If an emergency or unforeseen dewatering activity that will discharge to Waters of the United States occurs, the Contractor shall contact the Engineer immediately.

When discharging groundwater from dewatering activities to surface waters, the Contractor shall comply with and implement the Monitoring and Reporting Program required

under Order No. R7-2015-0006. This Order can be downloaded from http://www.waterboards.ca.gov/coloradoriver/board_decisions/adopted_orders/orders/2015/0006low_threat.pdf. Under the Monitoring and Reporting Program, the Contractor shall prepare the monitoring report in accordance with Attachment E of the Order. The Contractor must submit the Monitoring Reports to the Engineer by the 15th day of each month following the monitoring period. The District will submit the Monitoring Reports to the Colorado River Basin Regional Water Quality Control Board. The Monitoring Reports shall cover the previous month's monitoring activities.

If there is any other form of non-stormwater discharge from the project to surface waters, the Contractor shall immediately contact the Engineer to determine appropriate actions required for coverage under the De Minimus Permit.

Failure of the Contractor to fully comply with this requirement may result in the suspension of construction operations and liability for any associated monitoring, fines, penalties and remediation activities related to the discharge.

29.11 Reports -

(a) Annual Report - The Contractor shall be responsible for preparing an Annual Report to meet the requirements of Section XVI of the General Permit covering the preceding period of construction from July 1st to June 30th. The Annual Report shall be structured in accordance with the CASQA Construction BMP Handbook Portal Section 1.7. The Contractor shall submit two (2) copies of the Annual Report to the Engineer by July 15th of each year for review and approval. The Contractor shall allow ten (10) working days for the Engineer to review the Annual Report. If revisions are required as determined by the Engineer, the Contractor shall revise and resubmit the Annual Report within three (3) working days of receipt of the Engineer's comments. The Contractor shall submit four (4) copies of the approved Annual Report to the Engineer prior to August 15th of each year. **The Contractor shall be responsible for providing an Annual Report to the Engineer for any construction occurring for part of the year after July 1st prior to receiving final payment on the project.**

(b) Monthly Report - The Contractor shall prepare and submit to the Engineer a Monthly Report within five (5) working days of the end of the month including:

1. All visual observation reports;
2. All sampling and analysis reports;
3. All NAL Exceedance Reports; and
4. Summary of changes to the SWPPP and or REAP based on inspection results for the preceding month.

29.12 Payment - The contract lump sum price paid for Stormwater and Non-Stormwater Pollution Control work shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing all the work involved in developing, preparing, obtaining

approval of, revising and amending the PRDs, and installing, constructing, maintaining, removing and disposing of BMPs as shown in the SWPPP, as specified in the CASQA Handbook and Sample Contractor's Water Quality CSMP, General Permit and these Detailed Specifications, and as directed by the Engineer.

The contract lump sum price paid for Non-Stormwater Discharge or Dewatering shall include full compensation for compliance of Section 29.10, "Non-Stormwater Discharge or Dewatering". **Contractor shall not be paid any portion of the contract lump sum if coverage under the De Minimus Permit is not required.**

Monthly payment will be made on a basis of the percentage of work completed on the entire project and subject to the submittal of a complete Monthly Report as specified in Section 29.11(b). Failure to complete or report required visual inspections, monitoring, sampling and analysis requirements, NAL Exceedance Reports, and/or other necessary follow-up actions to ensure that the project stays in compliance with the General Permit can be the basis for reducing monthly progress payments for the project. Monthly progress payments will be reduced by the amount of direct costs, overhead costs and engineering costs incurred by the Engineer to address compliance deficiencies, including costs to conduct inspections, monitoring, reporting and supplemental BMP implementation necessary to comply with the General Permit and costs incurred by the Engineer to address complaints, additional State inspections and violations and/or fines issued by the State or USEPA associated with failure to properly comply with the General Permit. Progress payment reductions can exceed the monthly percentage or total contract lump sum price for Stormwater and Non-Stormwater Pollution Control work.

Payment will be made on a basis of the percentage of work completed on the entire project.

SECTION 30 - UTILITIES

30.1 Description - This section covers the contract items Remove and Reinstall New Water Meter and Lateral; Remove and Reinstall New Fire Hydrant; and Remove and Reinstall New Air Release Valve.

30.2 General Material and Installation Requirements - All items contained within this section shall conform to the following:

The Contractor shall contact the City of Banning to obtain and comply with any specification or requirements. The Contractor may obtain this information from the City of Banning at 99 E. Ramsey Street Banning, CA 92220 or via the web at http://www.ci.banning.ca.us/21/Engineering. It is the Contractor's responsibility to obtain the latest standard drawings and specifications by contacting the City of Banning.

The Contractor shall salvage and return to owner the removed appurtenances. The Contractor shall check and verify all field measurements and shall submit with such promptness as to cause no delay in its own work, five (5) copies of all field verified shop drawings,

schedules, materials list, removal and installation plan required for the completion of the relocations of existing appurtenances as shown on the project drawings.

District and City Engineer shall review such schedules and drawings only for conformance with design concept of project and compliance with information given in contract documents, and return marked "no exceptions noted" or "rejected" with guidance as to required corrections within ten (10) working days. Contractor shall make any correction required by District/City Engineer, file four (4) corrected copies with District Engineer, and furnish such other copies as may be needed for construction. District/City Engineer's approval of such drawings or schedules shall not relieve Contractor from responsibility for deviations from drawings or specifications. Any deviations from the submission requires written approval.

All submittals of shop drawings, catalog cuts, data sheets, and material lists shall be complete and shall conform to the City of Banning Standard Drawings and Specifications.

All materials necessary to make connections between the proposed location and existing system shall be furnished by the Contractor and shall be the size and class matching the existing facility. Provide valve box and cap for all buried valves. Install entire assembly centered and plumbed in accordance with the City of Banning standards. Valve boxes in areas to be paved must be accessible at all times during construction. Upon completion of paving operations, adjust the valve boxes and caps to finished grade. All materials for raising protection box and cap, including pavement, shall be supplied by the Contractor.

New connection locations shall be as directed by the City Engineer or his representative. Connections shall be made in a workmanlike manner and in accordance with water works standards. Prior to construction, Contractor shall excavate and expose all connection ends, verify locations, elevations, and conditions of existing facility. Existing valves shall be operated strictly by the City of Banning Water Department. Request for opening or closing the existing water system valves should be made to the City of Banning Water Department at least 48 hours in advance. Neatly cut the existing line and install valves, fittings, adaptors, and couplings as necessary for proper watertight, sound, and structurally integrated connection.

Salvage, return to, and properly log into the Owner's warehouse any valves, fittings, and appurtenances removed from the existing system. Schedule connections to the existing system through the City of Banning Water Department, and notify the Owner forty-eight (48) hours in advance of the time set for making connections.

During the storing, laying, and installing operation, the pipelines, all fittings, and appurtenances shall be carefully protected against contamination. All dirt and foreign materials shall be thoroughly removed. Before placing in service, the entire system shall be thoroughly flushed out and then disinfected by the Contractor in accordance with AWWA Standard C651 entitled "Disinfecting Water Mains". The flushing of all facilities shall be performed by the Contractor as directed by the City of Banning Water Department. All necessary chlorine shall be furnished by the Contractor. The Contractor is required to closely coordinate and cooperate with the City of Banning to ensure that the work proceeds in an orderly manner and that the waterline is out of service for a minimum period of time.

Included in these items is any earthwork required, Aggregate Base, and Asphalt Concrete used for resurfacing the street beyond the storm drain trench limits, testing dewatering, disinfection, and incidentals required to safely relocate items contained within this section per the City of Banning Standards and Specifications.

Excluded from these items is excavation, Aggregate Base, and Asphalt Concrete used for resurfacing the street within the storm drain trench limits, which is included in the contract items Excavation; Aggregate Base, Class 2; and Hot Mix Asphalt (HMA).

The Contractor shall notify the City of Banning, Public Utilities Department – Water Division, Art Vela, P.E., (951.922.3130) in writing at least ten (10) working days before a relocation is started.

30.3 Remove and Reinstall New Water Meter and Lateral - The contract item Remove and Reinstall New Water Meter and Lateral covers all labor, equipment, materials, and incidentals required for the complete removal of existing waterline house connections and reinstallation using new pipe from the mainline to the new meter as shown on the project drawings and as required by the City of Banning Specifications and these Detailed Specifications.

All work performed under this item shall conform to Section 30.2.

30.4 Remove and Reinstall New Fire Hydrant - The contract item Remove and Reinstall New Fire Hydrant covers all labor, equipment, materials, and incidentals required for the complete removal of existing fire hydrants and the relocation of new hydrants as shown on the project drawings and as required by the City of Banning Specifications and these Detailed Specifications.

All work performed under this item shall conform to Section 30.2.

30.5 Remove and Reinstall New Air Release Valve - The contract item Remove and Reinstall New Air Release Valve covers all labor, equipment, materials, and incidentals required for the complete removal of existing air release valves and relocation of new air release valves as shown on the project drawings and as required by the City of Banning Specifications and these Detailed Specifications.

All work performed under this item shall conform to Section 30.2.

30.6 Measurement and Payment - The contract lump sum prices paid for Remove and Reinstall New Water Meter and Lateral; Remove and Reinstall New Fire Hydrant; and Remove and Reinstall New Air Release Valve shall include full compensation for all costs incurred under this section except that excavation, Aggregate Base, and Asphalt Concrete used for resurfacing the street will be measured and paid for under the contract items Excavation; Aggregate Base, Class 2; and Hot Mix Asphalt (HMA).

APPENDIX "A"

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 403

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure		Guidance
Unpaved roads/parking lots	19-1	Stabilize soils to meet the applicable performance standards; and	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
	19-2	Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	
Vacant land	20-1	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

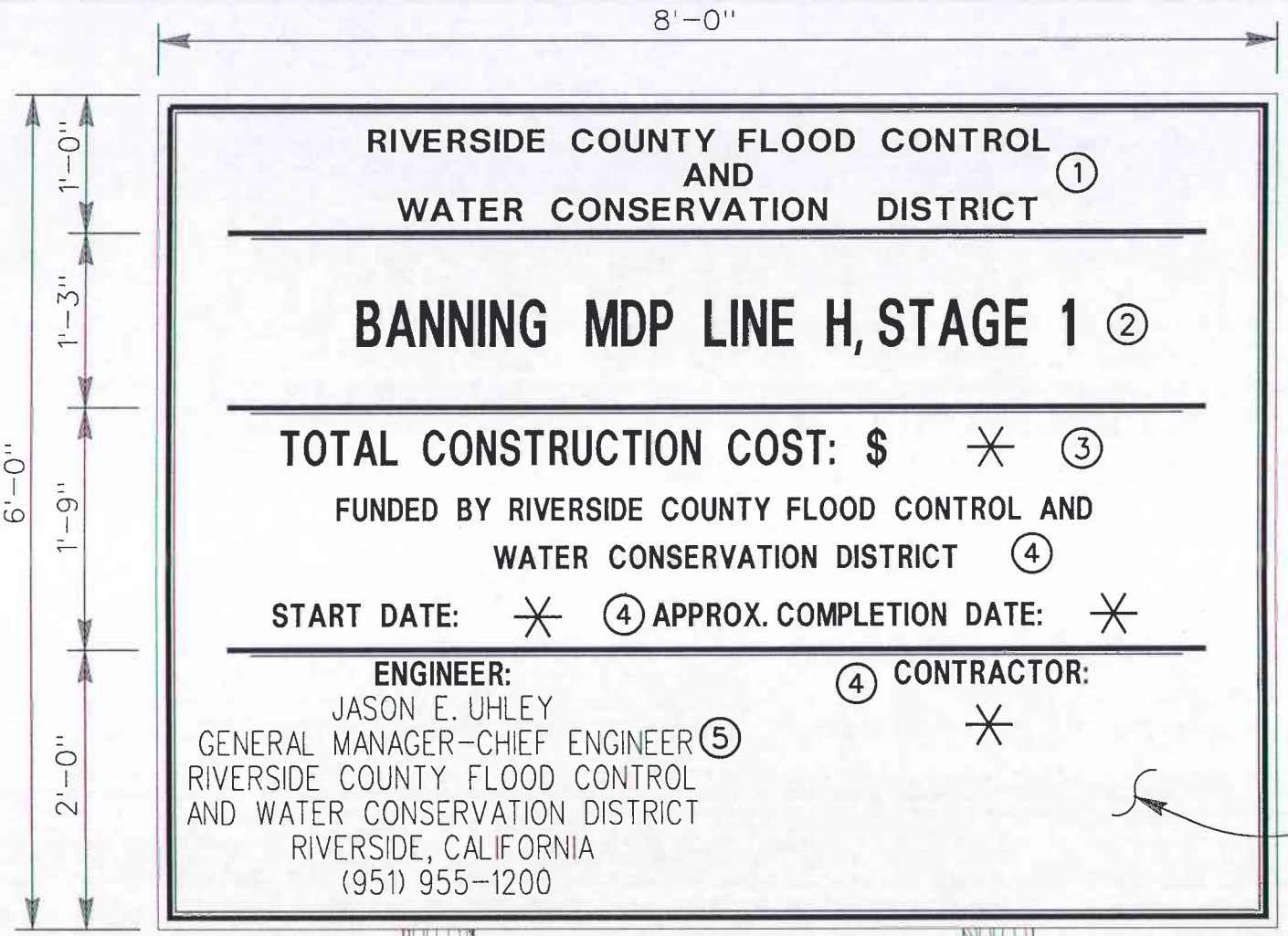
FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

APPENDIX "B"

PROJECT SIGNS



LETTER SCHEDULE

	SIZE	COLOR
(1)	2"	BLACK
(2)	4"	ROYAL
(3)	3"	ROYAL
(4)	2"	ROYAL
(5)	2"	BLACK

NOTES:

1. MINIMUM SPACING BETWEEN LINES 1".
2. ✳ -INFO. FURNISHED BY ENGINEER
3. ALL LETTERS FILLED AND CENTERED
4. THE STRIPES ARE GOLD AND BLACK ON WHITE BACKGROUND.

APPENDIX "B" PROJECT SIGN

APPENDIX "C"

LOG OF SOIL BORINGS
GEOTECHNICAL REPORT

NOTICE: The geotechnical report is included herein for informational purposes only. This report was not prepared for purposes of bid development. It was produced to assist the design engineer regarding overall project feasibility and to make recommendations regarding some design parameters. Contractors are encouraged to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer.

Geotechnical Bore Log B-1

Date: 5-10-2012	Project Name: Line H Storm Drain	Page 1 of 1
Project Number: M1105-001	Logged By: SM	
Drilling Company: Cal-Pac	Type of Rig: Mobile Drill B-61/Auto Hammer	
Drive Weight (lbs): 140 lb	Drop (in): 30 Hole Dia (in): 7	
Top of Hole Elevation (ft): 2200	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					AC	***6" Asphaltic Concrete***	
					Af	***Artificial Fill Soil***	Corrosion Suite, Maximum Density, R-Value, Expansion index
		Bag-1, 0-5'			SM	Silty SAND; dark brown, damp, medium dense, fine to medium	
					Qf	***Quaternary Alluvial Fan Deposits***	
5	8 12 14	R-1	111.2	4.6	SM	Silty SAND; tan, damp, medium dense, fine to very coarse with gravel (1-1/2")	
	7 13 12	SPT-1		5.7		Same	Remold Shear
10	7 14 16	R-2	115.4	6.7		Silty SAND; tan, damp, medium dense, fine to very coarse with 3/8" gravel	
15	32 50/4"	SPT-2		7.9		Same, gravel and rocks up to 2" in diameter	
20	31 50/4"	R-3				No Recovery	
25	16 24 25	SPT-3		8.1		Silty SAND; damp, gray-tan, dense, fine to very coarse, gravel up to 1/2"	
						Total Depth @ 26-1/2 feet	
						No Groundwater	
30							

MATRIX

Geotechnical Bore Log B-2

Date: 5-10-2012	Project Name: Line H Storm Drain	Page 1 of 1
Project Number: M1105-001	Logged By: SM	
Drilling Company: Cal-Pac	Type of Rig: Mobile Drill B-61/Auto Hammer	
Drive Weight (lbs): 140 lb	Drop (in): 30 Hole Dia (in): 7	
Top of Hole Elevation (ft): 2181	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					AC	***3" Asphaltic Concrete***	
					Af	***Artificial Fill Soil***	
					SM	Silty SAND; dark brown, damp, medium dense, fine to medium	
					Qf	***Quaternary Alluvial Fan Deposits***	
5	4 3 5	SPT-1		5.2	SM	Silty SAND; brown, samp, loose to medium dense, gravel up to 2" in diameter	
	8 8 13	R-1	105.4	4.8		Same	
10	6 7 17	SPT-2		6.8		Silty SAND; tan, damp, medium dense, coarse with gravel up tp 2"	
15	22 33 30	SPT-3		6.4		gray-tan, dry to damp, dense, gravel up to 2" in diameter	
						Appreciable amounts of gravel and rock up to 3" in diameter	
20	11 19 21	SPT-4		8.5		Silty SAND, with appreciable clay content, red-brown, fine to very coarse	
25	18 36 31	SPT-5		8.8		Gray-tan, damp, very dense, fine to coarse with gravel to 1-1/2" diameter	
						Total Depth @ 26-1/2 feet	
						No Groundwater	
30							

MATRIX

Geotechnical Bore Log B-3

Date: 5-10-2012	Project Name: Line H Storm Drain	Page 1 of 1
Project Number: M1105-001	Logged By: SM	
Drilling Company: Cal-Pac	Type of Rig: Mobile Drill B-61/Auto Hammer	
Drive Weight (lbs): 140 lb	Drop (in): 30 Hole Dia (in): 7	
Top of Hole Elevation (ft): 2174	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					AC/AB	***4" Asphaltic Concrete / 6" Aggregate Base***	
					Af	***Artificial Fill Soil***	
					SM	Silty SAND; dark brown, damp, medium dense, fine to medium, gravel to 1"	
					Qf	***Quaternary Alluvial Fan Deposits***	
5	10 8 11	R-1	108.3	5.4	SM	Silty SAND; brown, damp, medium dense, coarse with gravel to 3" diameter	
	7 11 14	SPT-1		4.2		tan, dry to damp, gravel to 1" diameter,	
10	16 14 11	R-2	109.7	4.7		same no gravel, fine to medium, damp	
15	5 9 20	SPT-2		8.1		brown, damp, medium dense, fine gravel 3/8" diameter	
20	26 26 27	SPT-3		7.9		dense, coarse gravel to 1" diameter	
25	12 20 25	SPT-4		8.3		gray-tan, damp, dense, fine gravel to 1/2" diameter	
						Total Depth @ 26-1/2 feet ***No Groundwater***	
30							

MATRIX

Geotechnical Bore Log B-4

Date: 5-10-2012	**Project Name: Line H Storm Drain**	**Page 1 of 1**
Project Number: M1105-001	**Logged By: SM**	
Drilling Company: Cal-Pac	**Type of Rig: Mobile Drill B-61/Auto Hammer**	
Drive Weight (lbs): 140 lb	**Drop (in): 30** **Hole Dia (in): 7**	
Top of Hole Elevation (ft): 2165	**Hole Location: See Geotechnical Map**	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					AC/AB	***4" Asphaltic Concrete / 7" Aggregate Base***	
					Af	***Artificial Fill Soil***	
					SM	Silty SAND; dark brown, damp, medium dense, fine to medium	
					Qf	***Quaternary Alluvial Fan Deposits***	
5	5 11 10	SPT-1		5.6	SM	Silty SAND; brown, damp, medium dense, coarse with gravel to 3/4" diameter	
	17 16 13	R-1	109.6	5.9		same	
10	6 10 15	SPT-2		7.3		fine to very coarse, fine gravel to 3/8" in diameter	
						no gravel, fine to medium, damp	
15	13 10 8	SPT-3		6.9		brown, damp, medium dense, fine gravel 3/8" diameter	
20	13 8 5	SPT-4		7.1		tan, damp, medium dense, fine to medium grained	
25	6 9 9	SPT-5		8.6		same	
						Total Depth @ 26-1/2 feet	
						No Groundwater	
30							

MATRIX

Geotechnical Bore Log B-5

Date: 5-10-2012	Project Name: Line H Storm Drain	Page 1 of 1
Project Number: M1105-001	Logged By: SM	
Drilling Company: Cal-Pac	Type of Rig: Mobile Drill B-61/Auto Hammer	
Drive Weight (lbs): 140 lb	Drop (in): 30 Hole Dia (in): 7	
Top of Hole Elevation (ft): 2155	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					AC/AB	***4" Asphaltic Concrete / 7" Aggregate Base***	
					Af	***Artificial Fill Soil***	
					SM	Silty SAND; dark brown, damp, medium dense, fine to medium	
					Qf	***Quaternary Alluvial Fan Deposits***	
5	5 8 10	R-1	109.4	6.5	SM	Silty SAND; brown, damp, medium dense	
	3 7 8	SPT-1		6.9		same	
10	5 8 11	R-2	113.7	5.8		fine to very coarse	
15	3 4 5	SPT-2		8.7		increased moisture content, loose	
20	4 9 18	SPT-3		7.2		tan, damp, medium dense	
25	11 13 8	SPT-4		7.8		same	
						Total Depth @ 26-1/2 feet	
						No Groundwater	
30							

MATRIX

Geotechnical Bore Log B-6

Date: 5-10-2012	**Project Name: Line H Storm Drain**	**Page 1 of 1**
Project Number: M1105-001	**Logged By: SM**	
Drilling Company: Cal-Pac	**Type of Rig: Mobile Drill B-61/Auto Hammer**	
Drive Weight (lbs): 140 lb	**Drop (in): 30** **Hole Dia (in): 7**	
Top of Hole Elevation (ft): 2149	**Hole Location: See Geotechnical Map**	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					AC/AB	***5" Asphaltic Concrete / 8" Aggregate Base***	
					Af	***Artificial Fill Soil***	
					SM	Silty SAND; dark brown, damp, medium dense, fine to medium	
					Qf	***Quaternary Alluvial Fan Deposits***	
5	3 3 4	SPT-1		4.9	SM	Silty SAND; brown, damp, loose, fine to coarse grained	
	7 18 17	R-1	115.2	5.3		becomes medium dense	
10	7 26 38	SPT-2		7.2		becomes dense	
15	3 6 5	SPT-3		4.6		loose to medium dense, no fine gravel	
20	6 7 8	SPT-4		5.7		same	
25	3 4 5	SPT-5		6.8		same	
						Total Depth @ 26-1/2 feet	
						No Groundwater	
30							

MATRIX

Geotechnical Bore Log B-7

Date: 5-10-2012	Project Name: Line H Storm Drain	Page 1 of 1
Project Number: M1105-001	Logged By: SM	
Drilling Company: Cal-Pac	Type of Rig: Mobile Drill B-61/Auto Hammer	
Drive Weight (lbs): 140 lb	Drop (in): 30 Hole Dia (in): 7	
Top of Hole Elevation (ft): 2130	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					AC	***3-1/2" Asphaltic Concrete***	
					Af	***Artificial Fill Soil***	
					SM	Silty SAND; dark brown, damp, medium dense, fine to medium	
					Qf	***Quaternary Alluvial Fan Deposits***	
5	5 8 9	R-1	113.2	8.8	SM	Silty SAND; brown, damp, medium dense, fine to very coarse grained	
	6 8 12	SPT-1		7.9		same	
10	7 12 12	R-2	116.0	8.3		tan, coarse gravel to 2" in diameter	
15	16 15 12	SPT-3		7.7		fine to very coarse sand, fine gravel to 1/2" diameter	
20	4 9 14	SPT-4		10.3		brown, increase in moisture, fine gravel to 3/8" diameter	
25	25 24 20	SPT-5		7.4		damp	
						Total Depth @ 26-1/2 feet	
30						***No Groundwater***	

MATRIX

Geotechnical Boring Log B-8

Date: 5-10-2012	**Project Name: Line H Storm Drain**	**Page 1 of 1**
Project Number: M1105-001	**Logged By: SM**	
Drilling Company: Cal-Pac	**Type of Rig: Mobile Drill B-61/Auto Hammer**	
Drive Weight (lbs): 140 lb	**Drop (in): 30** **Hole Dia (in): 7**	
Top of Hole Elevation (ft): 2146	**Hole Location: See Geotechnical Map**	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qf	***Quaternary Alluvial Fan Deposits***	
					SM	Silty SAND; dark brown, moist, medium dense, fine to medium grained	
5	2 2 3	SPT-1		8.3	SM	Silty SAND; brown, damp, loose, fine to coarse grained	
	6 10 11	R-1	108.7	6.4		fine gravel to 3/4" diameter	
10	4 5 7	SPT-2		6.1		tan, damp, medium dense, fine to very coarse grained sand	
15	6 5 7	SPT-3		8.9		brown, increased moisture, fine grained sand	
20	4 4 5	SPT-4		8.4		loose, moist, very fine grained sand	
25	11 16 19	SPT-5		11.0		gray-tan, moist, fine to very coarse grained sand, coarse gravel to 2" diameter	
						Total Depth @ 26-1/2 feet	
						No Groundwater	
30							

MATRIX

Geotechnical Boring Log B-9

Date: 5-10-2012	Project Name: Line H Storm Drain	Page 1 of 1
Project Number: M1105-001	Logged By: SM	
Drilling Company: Cal-Pac	Type of Rig: Mobile Drill B-61/Auto Hammer	
Drive Weight (lbs): 140 lb	Drop (in): 30 Hole Dia (in): 7	
Top of Hole Elevation (ft): 2140	Hole Location: See Geotechnical Map	

Depth (ft)	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qf	***Quaternary Alluvial Fan Deposits***	
					SM	Silty SAND; dark brown, moist, medium dense, fine to medium grained	
5	5 7 9	R-1	110.4	9.4		same	
	8 7 9	R-2	108.7	8.8		fine to coarse grained	
10	5 7 10	R-3	113.0	7.6		light brown, damp	
15	7 4 5	SPT-1		7.5		tan, coarse gravel to 1" diameter	
20	3 5 9	SPT-2		9.2		brown, moist, medium dense, very fine to fine sand	
25	5 10 11	SPT-3		10.8		same	
						Total Depth @ 26-1/2 feet	
						No Groundwater	
30							

MATRIX

Geotechnical Boring Log B-10

Date: 5-10-2012	Project Name: Line H Storm Drain	Page 1 of 1
Project Number: M1105-001	Logged By: SM	
Drilling Company: Cal-Pac	Type of Rig: Mobile Drill B-61/Auto Hammer	
Drive Weight (lbs): 140 lb	Drop (in): 30 Hole Dia (in): 7	
Top of Hole Elevation (ft): 2132	Hole Location: See Geotechnical Map	

Depth (f	Blow Count / 6"	Sample No.	Dry Density (pcf)	Moisture (%)	Geologic / USCS Symbol	DESCRIPTION	Type of Test
0					Qf	***Quaternary Alluvial Fan Deposits***	
					SM	Silty SAND; dark brown, moist, fine to medium grained	
5	5 4 4	SPT-1		7.2		brown, damp, loose	
	7 9 11	R-1	111.9	8.3		medium dense, fine gravel	
10	5 7 9	SPT-2		8.0		same	
15	5 5 5	SPT-3		4.9		white-tan, dry, loose, fine grained sand	
20	5 7 7	SPT-4		5.6		same	
25	4 6 6	SPT-5		5.9		same	
						Total Depth @ 26-1/2 feet	
30						***No Groundwater***	

MATRIX

APPENDIX "D"

RCFC VIDEO PROCEDURES

RCFC VIDEO PROCEDURES

GENERAL:

1. The Contractor shall provide all required traffic control, including warning lights and traffic cones, as needed or required in accordance with the Watch Manual, as well as any City-required traffic plans.

2. The Contractor shall obtain all permits required by the local jurisdiction.

STORM DRAIN CLEANING:

1. Storm drains shall be cleaned by removing dirt, debris and any construction debris.

2. If debris is found, the closed circuit television (CCTV) shall be rescheduled.

EQUIPMENT:

1. Contractor's staff shall have confined space training.

2. Air logs shall be kept onsite and shall be submitted with the final report.

3. The Contractor's CCTV equipment shall include video cameras, a video monitor cable, power sources, and all equipment necessary to perform a CCTV inspection as outlined in the Detailed Specifications.

4. The Contractor shall make a continuous color digital recording in MPEG 4 format for each storm drain segment inspected.

5. The cameras shall have pan and tilt capabilities, a minimum of 360 x 260 degree rotation, illumination sensitivity shall be three lux or less, and provide a minimum of 460 lines of resolution. The focal distance shall be adjustable through a range from 25mm (1 inch) to infinity.

6. During CCTV inspection, lighting intensity shall be adjusted to minimize glare. Lighting and picture quality shall be adjusted to provide a clear, in-focus picture of the entire periphery of the storm drain for all conditions encountered.

7. All camera systems shall be able to navigate around minor objects, roots, and debris. The system used to move the camera through the pipe shall not obstruct the camera's view or interfere with proper documentation of storm drain conditions.

8. The camera cable shall be retracted to remove slack and to ensure an accurate footage reading.

9. The distance shall be measured between beginning and ending structures.

10. The cable footage-counter shall be accurate to plus or minus 2 feet per 1,000 feet.

11. The camera lens shall be kept clear of condensation and debris during the CCTV inspection.

VIDEO:

1. All storm drain with a height or diameter of 60 inches or less shall be video recorded.

2. If the storm drain has multiple cells, each cell shall be video recorded.

3. Each storm drain segment will be a separate video file.

4. A storm drain segment will be defined as follows:

    a. Outlet structure to manhole
    b. Manhole to manhole
    c. Manhole to inlet structure

5. Each storm drain segment shall be identified with an initial text screen that contains the following:

    a. Surveyed by
    b. Storm drain title (i.e., mainline title, lateral title)
    c. Beginning structure station
    d. Ending structure station
    e. Pipe diameter or box dimensions
    f. Inspection date and time
    g. Stopwatch time initiated at beginning of video

6. After the initial text screen, the following shall be shown for the remainder of video:

    a. Beginning structure station
    b. Ending structure station
    c. Distance from beginning structure
    d. Stopwatch time initiated at beginning of video

OBSERVATIONS:

1. The following visual observations shall be recorded in the final report:

    a. Poor/no grouting between storm drain links
    b. Poor/no grouting at storm drain lift holes
    c. Exposed steel or spalling

d. Large cracks
e. Sags
f. Any unusual roughness or unevenness
g. Any connections not shown on plans
h. Structural defects of structures (i.e., junction structures, manholes, etc.)
i. Debris

REPORT:

1. The report shall contain a spreadsheet of observations of concern with the following:

    a. Description of concern
    b. Video file name
    c. Photo file name
    d. Stop watch time
    e. Distance from beginning structure

2. A digital picture of each concern in JPEG format shall be included within the report and the file name shall be included in spreadsheet.

3. The database header information contained within the final report will match the initial video screen

Q\Specscntr
01/15/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

GENERAL NOTES

1. BEDDING AND PAYLINES ARE SHOWN ON RCFC STANDARD DRAWING M815 UNLESS SHOWN OTHERWISE ON THESE PLANS.
2. ALL STATIONS REFER TO CENTERLINE OF CONSTRUCTION UNLESS OTHERWISE NOTED.
3. ALL CHANNEL/STORM DRAIN REFERENCES AND CROSS SECTIONS ARE TAKEN LOOKING DOWNSTREAM.
4. TOPOGRAPHY BY DIGITAL PHOTOGRAMMETRIC METHODS, AERIAL PHOTOGRAPHS TAKEN AT AN ALTITUDE NOT TO EXCEED A FLYING HEIGHT TO CONTOUR INTERVAL RATIO OF 1800. PHOTOGRAPHY DATED: 04-15-2010.
5. THE VERTICAL DATUM IS DERIVED FROM NAVD 88. THE HORIZONTAL DATUM IS DERIVED FROM NAD 83, EPOCH 2007.
6. STANDARD DRAWINGS CALLED FOR ON THE PLAN AND PROFILE SHALL CONFORM TO RCFC & WCD STANDARD DRAWINGS, OR CALTRANS/CITY STANDARD PLANS UNLESS OTHERWISE NOTED.
7. ELEVATIONS AND LOCATIONS OF UTILITIES WERE OBTAINED FROM AVAILABLE INFORMATION AND ARE SHOWN APPROXIMATELY ON THESE PLANS. 48 HOURS BEFORE EXCAVATION CALL UNDERGROUND SERVICE ALERT AT 1-800-227-2600. ALL UTILITIES SHALL BE PROTECTED IN PLACE EXCEPT AS NOTED ON PLANS AND SPECIFICATIONS.
8. THE CONTRACTOR IS REQUIRED TO CONTACT ALL UTILITY AGENCIES REGARDING TEMPORARY SUPPORT AND SHORING REQUIREMENTS FOR THE VARIOUS UTILITY LINES SHOWN ON THESE PLANS.
9. ALL OPENINGS RESULTING FROM CUTTING OR PARTIAL REMOVAL OF EXISTING CULVERTS, PIPES OR SIMILAR STRUCTURES TO BE ABANDONED SHALL BE SEALED AT BOTH ENDS WITH 6" OF CLASS "B" CONCRETE.
10. UNLESS OTHERWISE SPECIFIED, MINIMUM STREET RECONSTRUCTION SHALL BE 4" TYPE "A" HOT MIX ASPHALT OVER 6" CLASS 2 AGGREGATE BASE OR AS SPECIFIED BY THE ENGINEER.
11. ALL RECONSTRUCTION RESURFACING AND PAVEMENT DELINEATION, CURBS, SIDEWALKS AND OTHER IMPROVEMENTS ARE TO BE RECONSTRUCTED IN AND AT THE SAME LOCATIONS AND ELEVATIONS AS THE EXISTING IMPROVEMENTS, UNLESS OTHERWISE NOTED.
12. THE CONTRACTOR SHALL SECURE ALL REQUIRED ENCROACHMENT PERMITS PRIOR TO COMMENCEMENT OF ANY WORK.
13. ⊗ INDICATES APPROXIMATE SOIL BORING LOCATION PER SOILS REPORT DATED 05/05/13.
14. PH# ⊠ INDICATES APPROXIMATE POTHOLE LOCATION PER SUBSURFACE UTILITY REPORT DATED 12/19/16.
15. THE CONCRETE COATING ON THE INSIDE OF ALL REINFORCED CONCRETE PIPES MUST BE INCREASED TO PROVIDE A MINIMUM OF 1-1/2 INCHES OVER THE REINFORCING AND INCREASED TO A MINIMUM OF 3-1/2 INCHES OVER REINFORCING (INVERT SLAB) FOR BOX CULVERT WHEN DESIGN VELOCITIES EXCEED 20 FEET PER SECOND. THE CONCRETE DESIGN STRENGTH IN THESE REACHES SHALL BE F'C=5,000 PSI FOR VELOCITIES EXCEEDING 20 FEET PER SECOND AND F'C=6,000 PSI FOR VELOCITIES EXCEEDING 30 FEET PER SECOND.
16. ACCESS FOR THE WORK IS ONLY AUTHORIZED WITHIN THE IDENTIFIED PUBLIC ROAD RIGHTS OF WAY, AND EASEMENTS/TCE SHOWN. NO IMPACTS OR ACCESS IS AUTHORIZED OUTSIDE THESE LIMITS.

RCFC & WCD STANDARD DRAWINGS

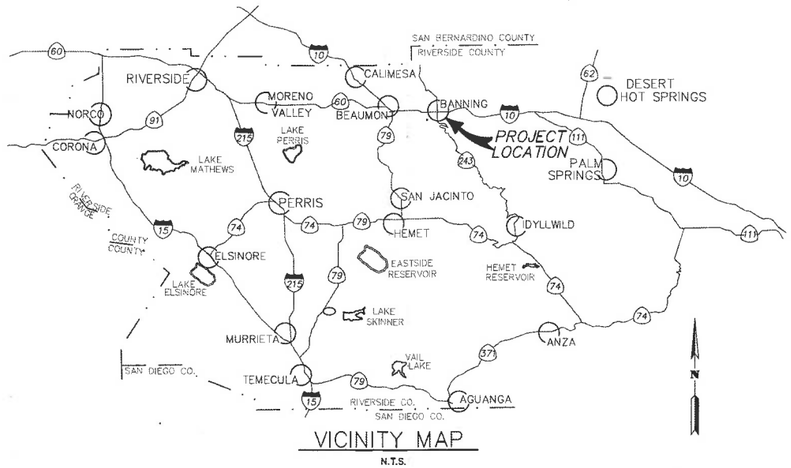
CB 100	CATCH BASIN NO. 1
CB 110	CONCRETE DROP INLET
LD 201	LOCAL DEPRESSION CASE "B"/"C"
JS 227	JUNCTION STRUCTURE NO. 2
JS 229	JUNCTION STRUCTURE NO. 4
MH 251	MANHOLE NO. 1
MH 252	MANHOLE NO. 2
MH 253	MANHOLE NO. 3
MH 254	MANHOLE NO. 4
TS 301	TRANSITION STRUCTURE NO. 1
TS 303	TRANSITION STRUCTURE NO. 3
M 816	CONCRETE BULKHEAD
M 803	CONCRETE COLLAR

CALTRANS STANDARD DRAWINGS

D84	BOX CULVERT HEADWALL
D80	CAST-IN-PLACE RCB
A73A	OBJECT MARKERS

CITY OF BANNING STANDARD DRAWINGS

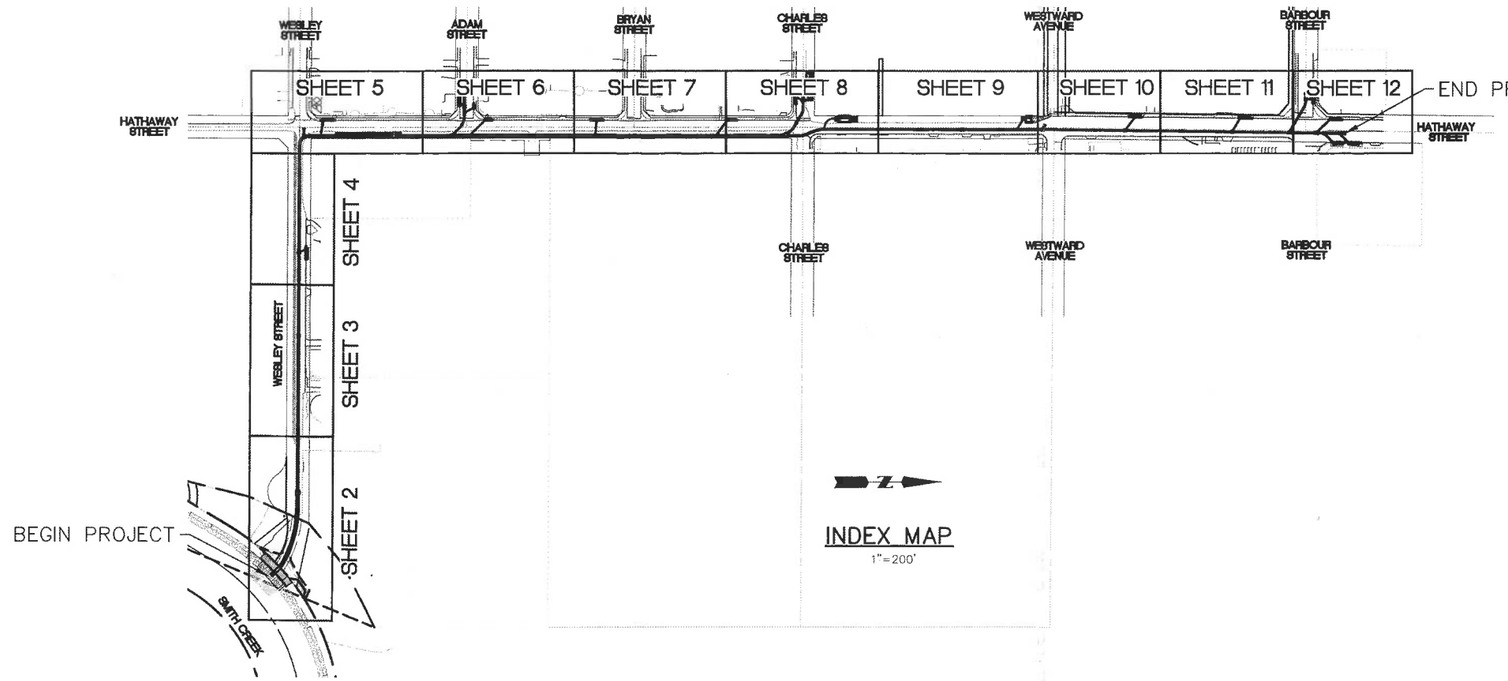
W-7	1-1/2" THRU 2" COPPER SERVICE INSTALLATION
C-211	CROSS GUTTER AND SPANDREL
W-18	FIRE HYDRANT INSTALLATIONS
W-15	1" AND 2" AIR AND VACUUM VALVE ASSEMBLY
W-20	VALVE AND VALVE BOX INSTALLTION
S-5	ADJUST EXISTING MANHOLE TO GRADE



VICINITY MAP

N.T.S.

INDEX



INDEX MAP

1"=200'

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services. TWO WORKING DAYS BEFORE YOU DIG

SEAL-ENGINEER: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

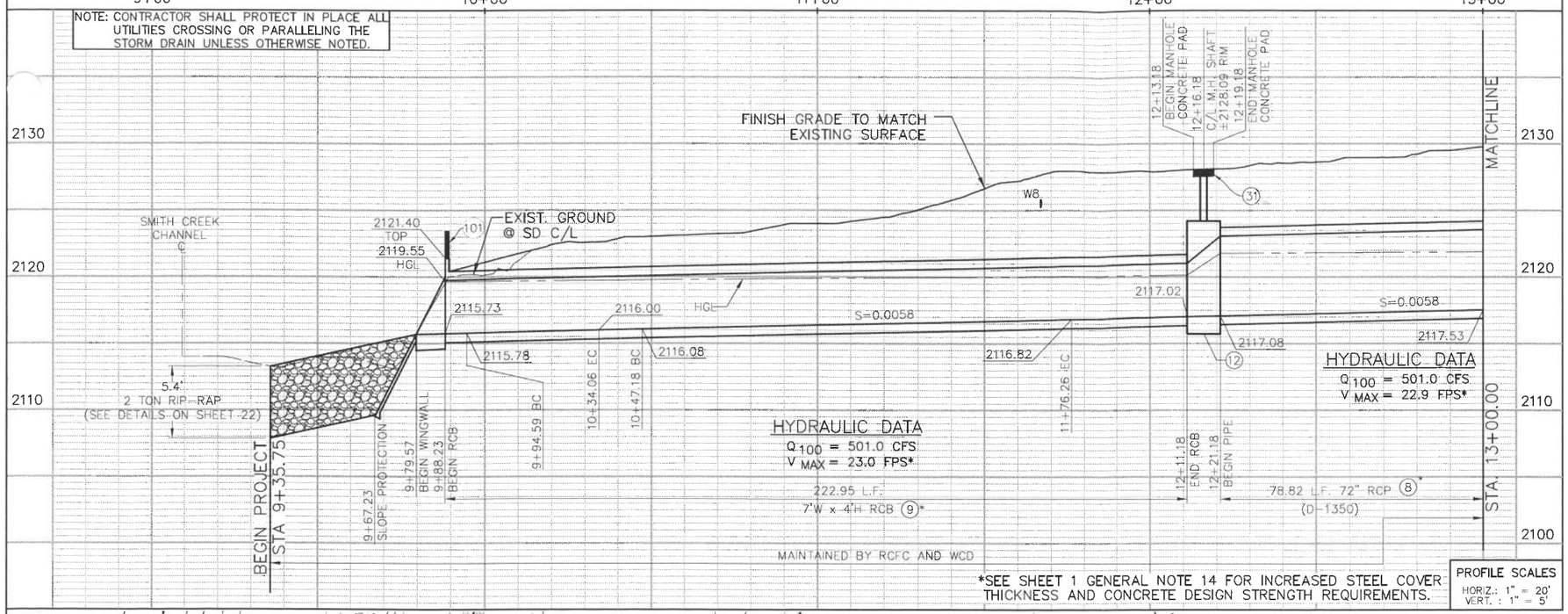
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
CHIEF, DESIGN AND CONSTRUCTION
DATE: 11/25/19
APPROVED BY:
GENERAL MANAGER-CHIEF ENGINEER
DATE: 11/21/19

BANNING MDP LINE H
STAGE 1
TITLE SHEET

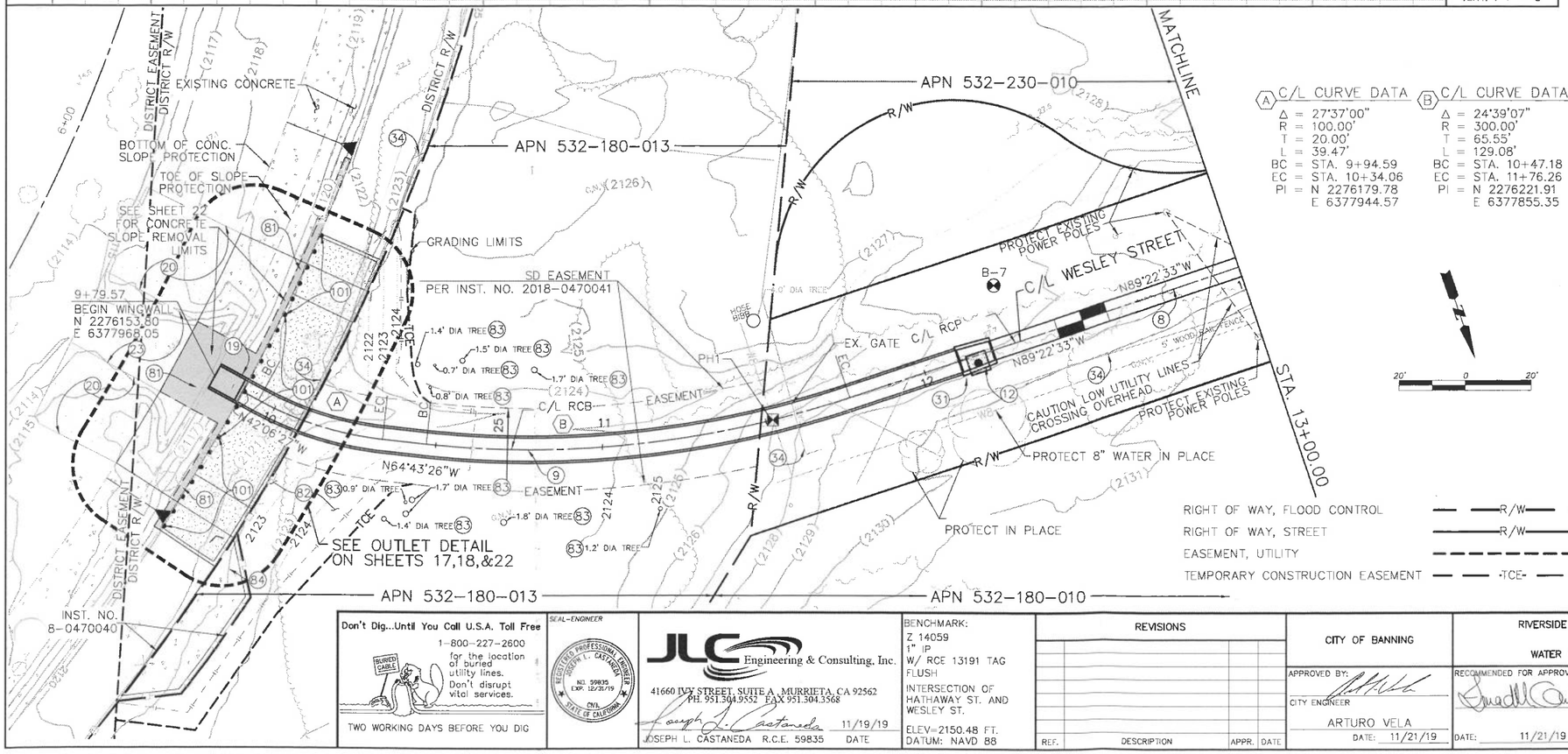
PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 1 OF 27

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



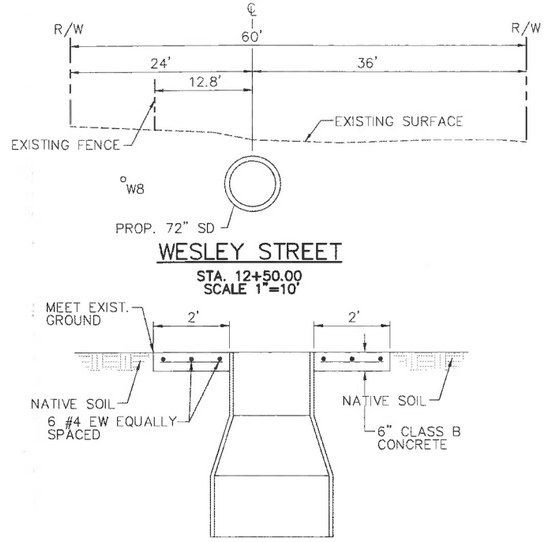
*SEE SHEET 1 GENERAL NOTE 14 FOR INCREASED STEEL COVER THICKNESS AND CONCRETE DESIGN STRENGTH REQUIREMENTS.

PROFILE SCALES
HORIZ.: 1" = 20'
VERT. : 1" = 5'



(A) C/L CURVE DATA	(B) C/L CURVE DATA
Δ = 27°37'00"	Δ = 24°39'07"
R = 100.00'	R = 300.00'
T = 20.00'	T = 65.55'
L = 39.47'	L = 129.08'
BC = STA. 9+94.59	BC = STA. 10+47.18
EC = STA. 10+34.06	EC = STA. 11+76.26
PI = N 2276179.78 E 6377944.57	PI = N 2276221.91 E 6377855.35

RIGHT OF WAY, FLOOD CONTROL —— R/W ——
RIGHT OF WAY, STREET —— R/W ——
EASEMENT, UTILITY - - - - - -
TEMPORARY CONSTRUCTION EASEMENT — — TCE — —



MANHOLE DETAIL W/ CONCRETE PAD
SCALE 1"=2'

CONSTRUCTION NOTES

(8) CONSTRUCT 72" RCP (D-LOAD PER PROFILE).

(9) CONSTRUCT 7'W x 4'H MODIFIED REINFORCED CONCRETE BOX PER CALTRANS STD. PLAN D80. FOR REINFORCEMENT AND WALL, INVERT AND ROOF THICKNESS USE SPAN=7', HEIGHT=5', COVER=10' OR LESS. INVERT THICKNESS (T3) SHALL BE 11.5" AND 3.5" OF COVER OVER REBAR AND PER SHEET 1, NOTE 14.

(12) CONSTRUCT TRANSITION STRUCTURE NO. 1 PER RCFC & WCD STD. NO. TS301.

(19) CONSTRUCT WINGWALL PER DETAILS ON SHEET 18.

(20) CONSTRUCT 1/4 TON RIPRAP WITH MIRAFI AND SEE NOTES ON SHEET 17 PER CALTRANS STD. SPEC. SECTION 72 PLACEMENT METHOD B AND DETAIL "A" ON SHEET 18. PLACE ROCK TO MEET EXISTING GRADE AT PERIMETER.

(23) CONSTRUCT 2 TON RIPRAP WITH MIRAFI AND SEE NOTES ON SHEET 17 PER CALTRANS STD. SPEC. SECTION 72 PLACEMENT METHOD A AND DETAIL "A" ON SHEET 18. PLACE ROCK TO MEET EXISTING GRADE AT PERIMETER.

(31) CONSTRUCT MANHOLE NO. 3 PER RCFC & WCD STD. NO. MH253, WITH CONCRETE PAD PER DETAIL HEREON.

(34) REMOVE INTERFERING FENCE/GATE AND REPLACE IN KIND AFTER CONSTRUCTION.

(81) REMOVE AND DISPOSE OF EXISTING 4-IN THICK SLOPE PAVING PER REMOVAL LIMITS SHOWN ON SHEET 22. REPLACE WITH 6-IN THICK SLOPE PAVING,CLASS A CONCRETE W/ #4 BARS @ 18" O.C. VARY SIDESLOPE TO MATCH EXISTING ADJACENT SLOPE PAVING AND CONSTRUCT CUTOFF WALLS PER SECTION E-E ON SHEET 22.

(82) GRADE TO DRAIN AS SHOWN ON SHEET 17.

(83) PROTECT EXISTING TREES IN PLACE.

(84) CONSTRUCT MAINTENANCE ACCESS PULL OFF AREA WITH 3" THICK COARSE AGGREGATE PER DISTRICT SPECIFICATIONS AND AS SHOWN ON SHEET 17.

(101) CONSTRUCT OBJECT MARKERS PER CALTRANS STD. PLAN A73A, TYPE Q (CA).

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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SEAL-ENGINEER
REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG
FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

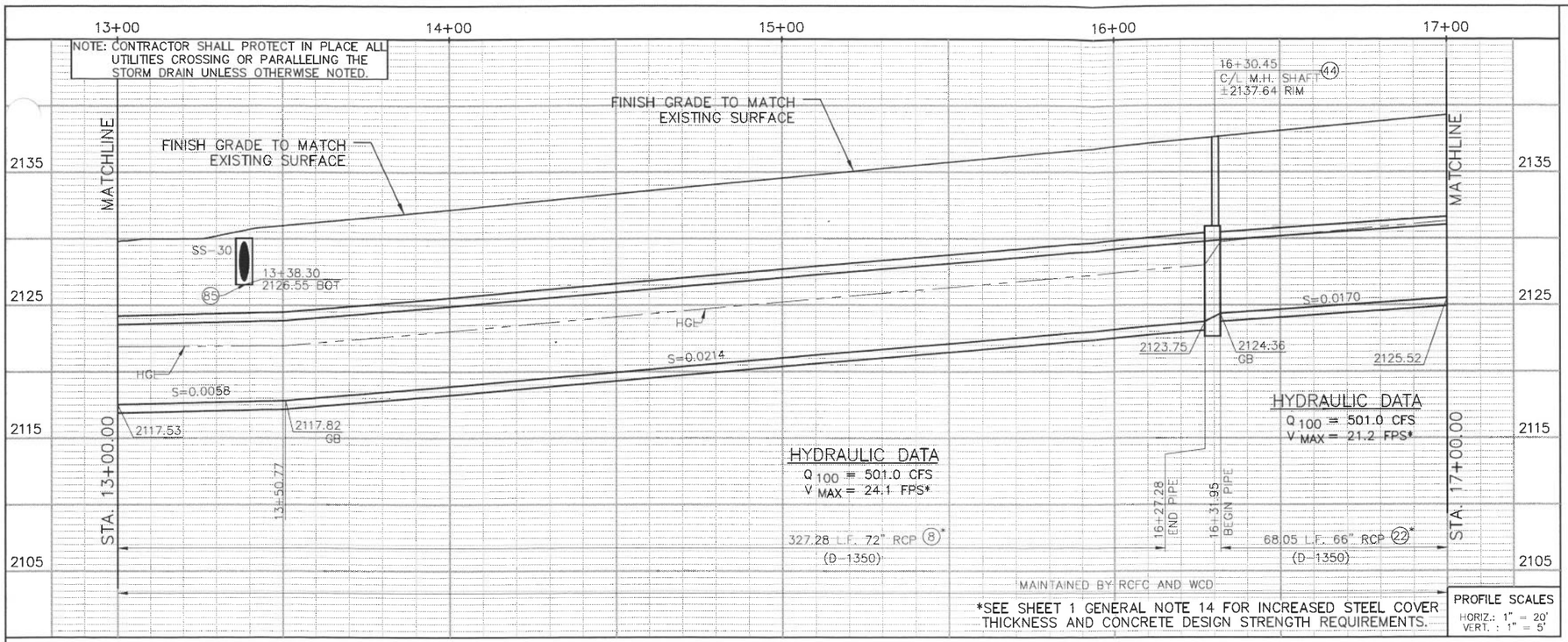
REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

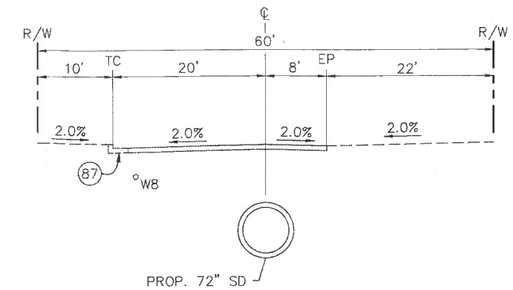
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

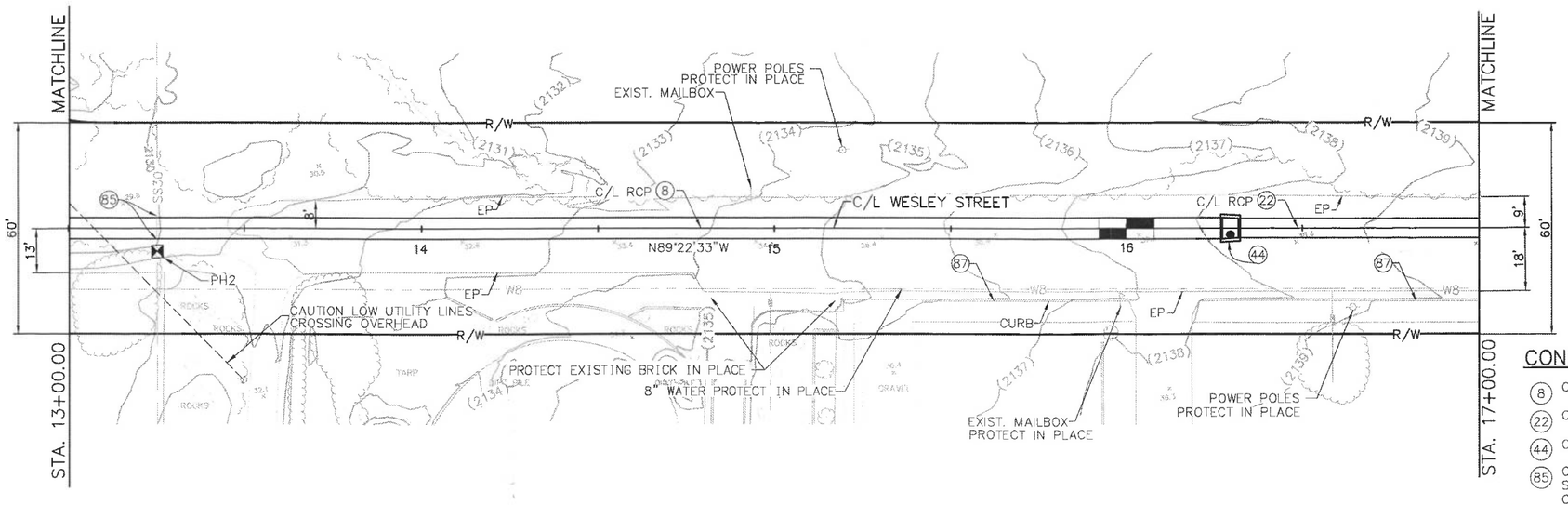
BANNING MDP LINE H
STAGE 1
LINE "H"
9+35.75 - 13+00.00

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 2 OF 27





WESLEY STREET
STA. 16+00.00
SCALE 1"=10'



CONSTRUCTION NOTES

(8) CONSTRUCT 72" RCP (D-LOAD PER PROFILE)

(22) CONSTRUCT 66" RCP (D-LOAD PER PROFILE).

(44) CONSTRUCT MANHOLE NO. 2 PER RCFC & WCD STD. NO. MH252; L=5.5', D_1=66',D_2=72",P=5".

(85) CONTRACTOR SHALL POTHOLE BOTH ENDS OF THE ENCASEMENT AND PROVIDE SUPPORT ON THE ENCASEMSENT AND SEWER MAIN BEFORE AND DURING CONSTRUCTION.

(87) PROTECT EXISTING CURB IN PLACE

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

20' 0 20'

Don't Dig...Until You Call U.S.A. Toll Free
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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
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1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
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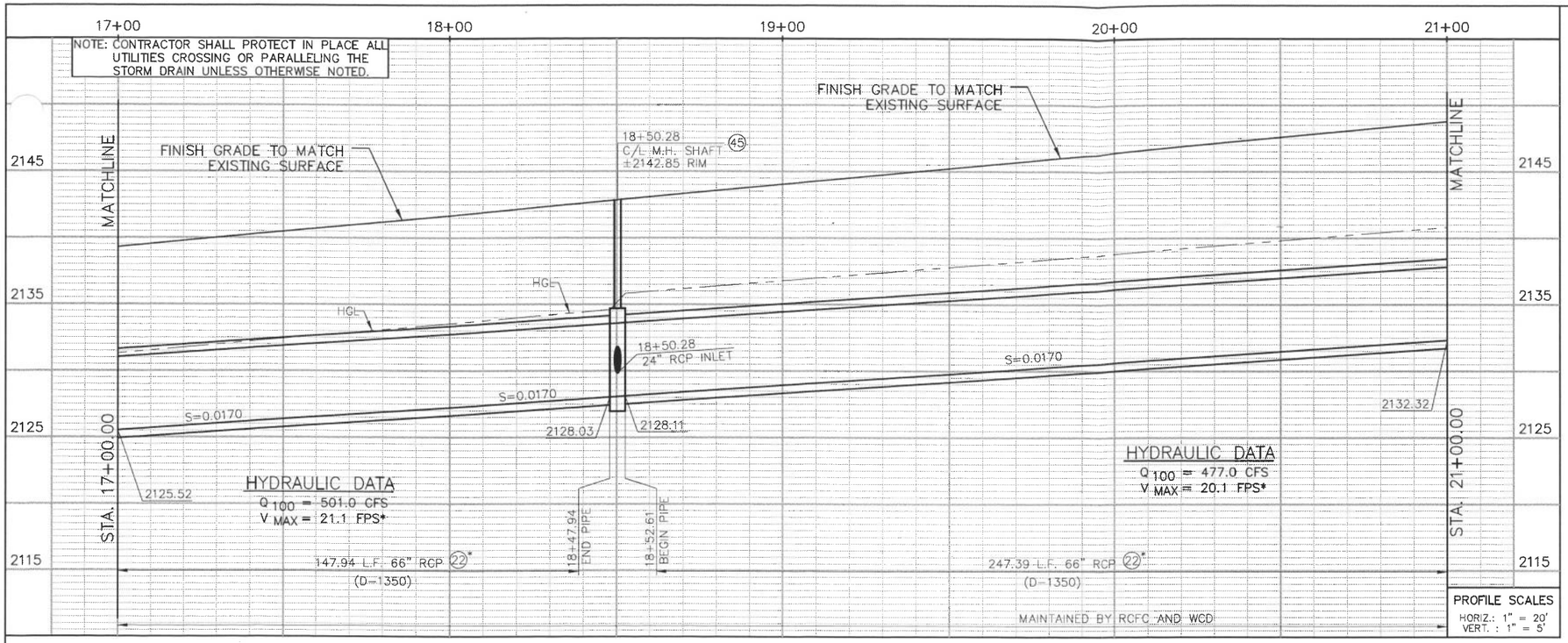
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

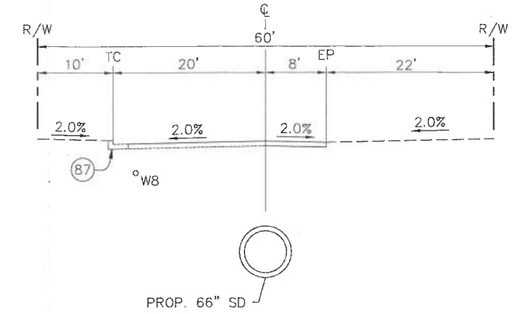
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LINE "H"
13+00.00 – 17+00.00

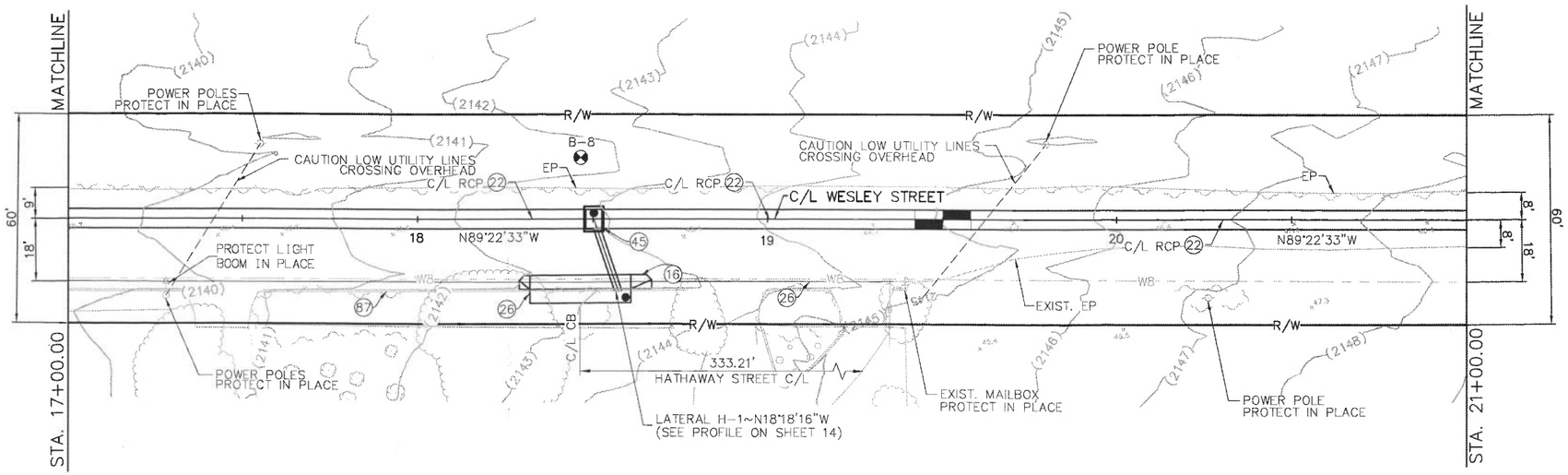
PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 3 OF 27



*SEE SHEET 1 GENERAL NOTE 14 FOR INCREASED STEEL COVER THICKNESS AND CONCRETE DESIGN STRENGTH REQUIREMENTS.



WESLEY STREET
STA. 19+50.00
SCALE 1"=10'



CONSTRUCTION NOTES

(16) CONSTRUCT LOCAL DEPRESSION TYPE "B" PER RCFC & WCD STD. NO. LD201.

(22) CONSTRUCT 66" RCP (D-LOAD PER PROFILE).

(26) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB100. W=28'; V=8'; 18'-24" RCP CLASS IV. SEE PROFILE ON SHEET 14.

(45) CONSTRUCT MANHOLE NO. 2 PER RCFC & WCD STD. NO. MH252. L=5.5',D_1=D_2=66".

(87) PROTECT EXISTING CURB IN PLACE.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

20' 0 20'

P8\228253

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG
FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

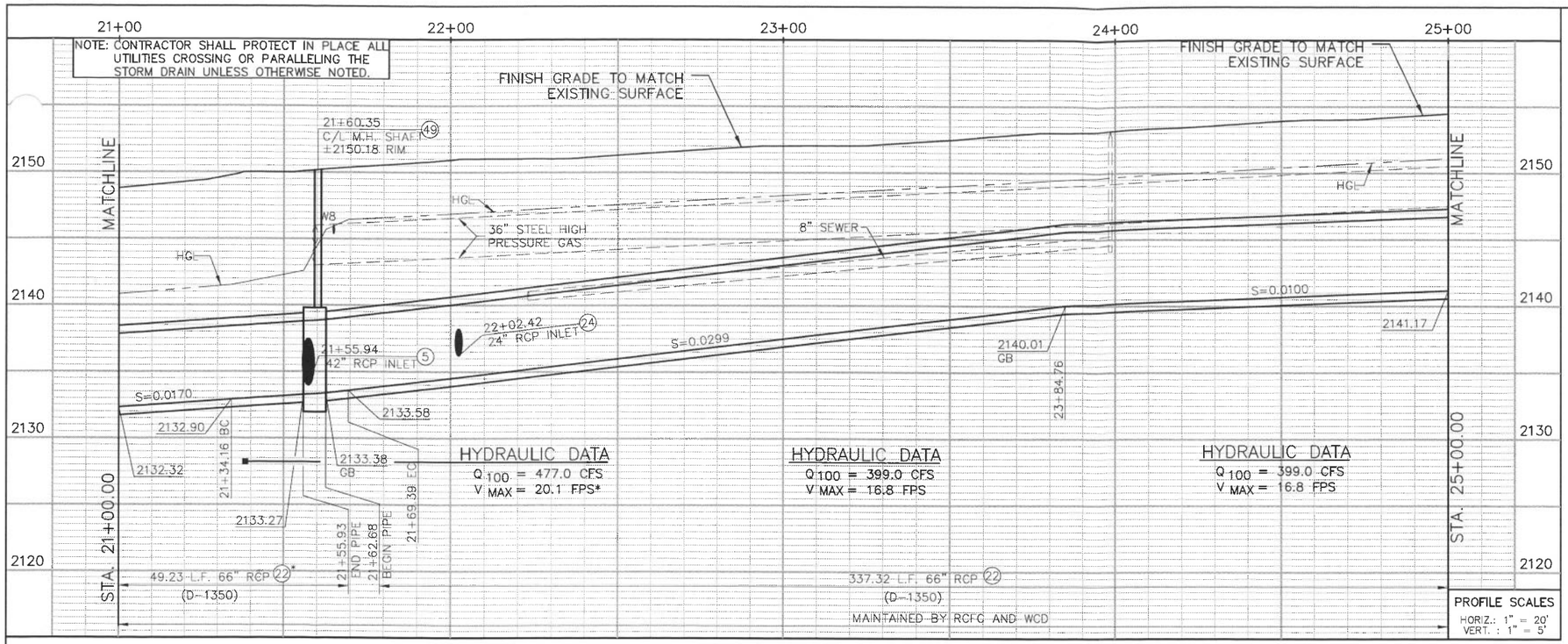
REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

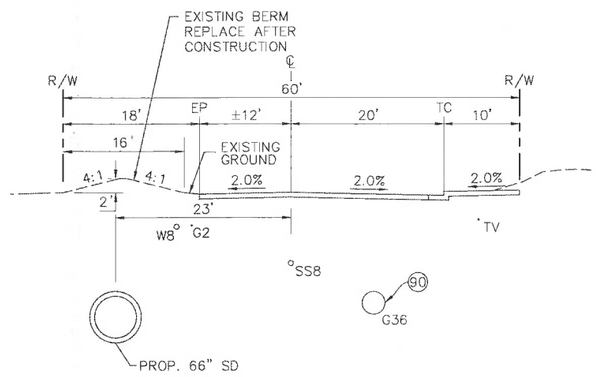
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LINE "H"
17+00.00 – 21+00.00

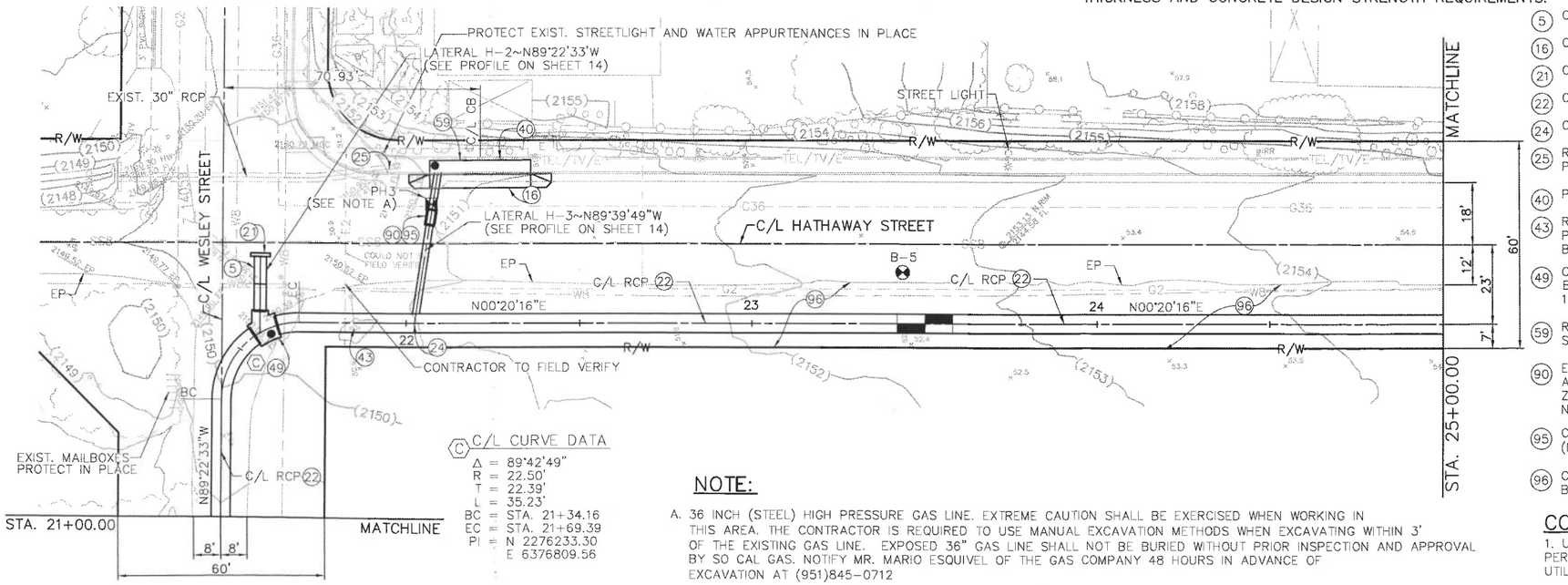
PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 4 OF 27





HATHAWAY STREET

STA. 23+50.00
SCALE 1"=10'



C/L CURVE DATA

Δ	= 89°42'49"
R	= 22.50'
T	= 22.39'
L	= 35.23'
BC	= STA. 21+34.16
EC	= STA. 21+69.39
PI	= N 2276233.30 E 6376809.56

NOTE:

A. 36 INCH (STEEL) HIGH PRESSURE GAS LINE. EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING IN THIS AREA. THE CONTRACTOR IS REQUIRED TO USE MANUAL EXCAVATION METHODS WHEN EXCAVATING WITHIN 3' OF THE EXISTING GAS LINE. EXPOSED 36" GAS LINE SHALL NOT BE BURIED WITHOUT PRIOR INSPECTION AND APPROVAL BY SO CAL GAS. NOTIFY MR. MARIO ESQUIVEL OF THE GAS COMPANY 48 HOURS IN ADVANCE OF EXCAVATION AT (951)845-0712

*SEE SHEET 1 GENERAL NOTE 14 FOR INCREASED STEEL COVER THICKNESS AND CONCRETE DESIGN STRENGTH REQUIREMENTS.

CONSTRUCTION NOTES

(5) CONSTRUCT 42" RCP (D-LOAD PER PROFILE.).
(16) CONSTRUCT LOCAL DEPRESSION TYPE "B" PER STD. LD201.
(21) CONSTRUCT CONCRETE BULKHEAD PER RCFC & WCD STD. NO. M816.
(22) CONSTRUCT 66" RCP (D-LOAD PER PROFILE).
(24) CONSTRUCT JUNCTION STRUCTURE NO. 4 PER RCFC & WCD STD. NO. JS229.
(25) REMOVE INTERFERING PORTION OF EXISTING 30" RCP PLUG THE UPSTREAM OPENING PER SHEET 1 GENERAL NOTE 9.
(40) PROTECT EXISTING TEL/TV/E LINE IN PLACE.
(43) REMOVE AND REINSTALL NEW FIRE HYDRANT AS DIRECTED BY THE ENGINEER AND PER CITY OF BANNING STANDARD DRAWING NO. W-18. LOCATION TO BE DETERMINED BY THE CITY ENGINEER OR HIS FIELD REPRESENTATIVE.
(49) CONSTRUCT MANHOLE NO. 4 PER RCFC & WCD STD. NO. MH254. A=23'43'52", B=42", C=6.54', D_1=D_2=66", ELEV. R=2134.42 ELEV. S=2134.39. 16'-42" RCP D-1350 PER PROFILE, SHEET 14.
(59) REPLACE EXISTING 7' CATCH BASIN WITH CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB 100. W=28'; V=7'; 41'-24" RCP CLASS IV. SEE PROFILE, SHEET 14.
(90) EXPOSED 36" GAS LINE SHALL NOT BE BURIED WITHOUT PRIOR INSPECTION AND APPROVAL BY SO CAL GAS. THE PIPELINE MUST BE BACKFILLED WITH SAND OR ZERO-SACK SLURRY ONLY WITHIN 3 FEET (HORIZONTAL AND VERTICAL) OF THE PIPELINE. NO MECHANICAL EQUIPMENT SHALL OPERATE WITHIN SAID 3 FEET OF PIPLEINE.
(95) CONSTRUCT TRANSITION STRUCTURE NO. 3 PER RCFC & WCD STD. NO. TS303. (NO LATERAL CONNECTION: A=B=C=ELEV. R=ELEV. S=N/A) D_1=D_2=24".
(96) CONSTRUCT DIRT BERM 2' HIGH, 16' WIDE WITH 4:1 SIDE SLOPES AND AS DIRECTED BY THE ENGINEER.

CONTRACTOR NOTES:

1. UTILITY ELEVATIONS ON PROFILE ARE PLOTTED PER POTHOLE SURVEY. CONTRACTOR TO VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

20' 0 20'

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
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1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

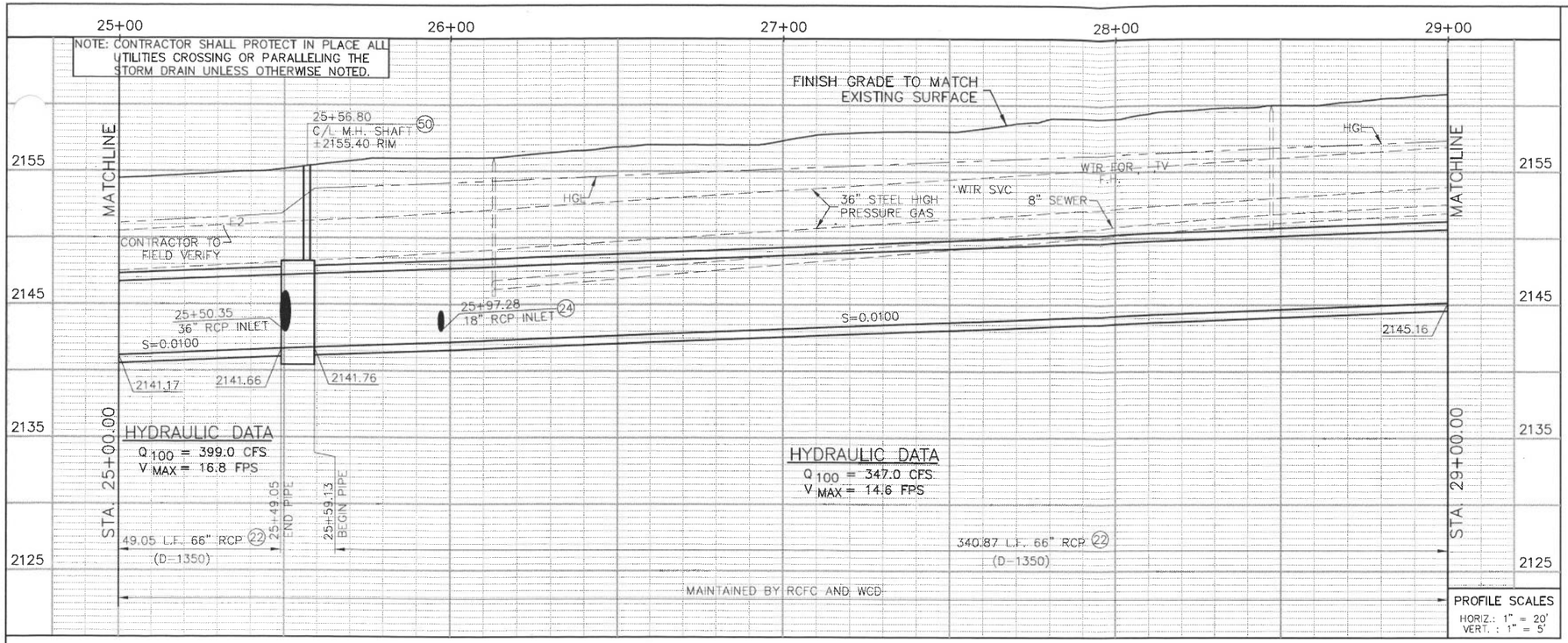
REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

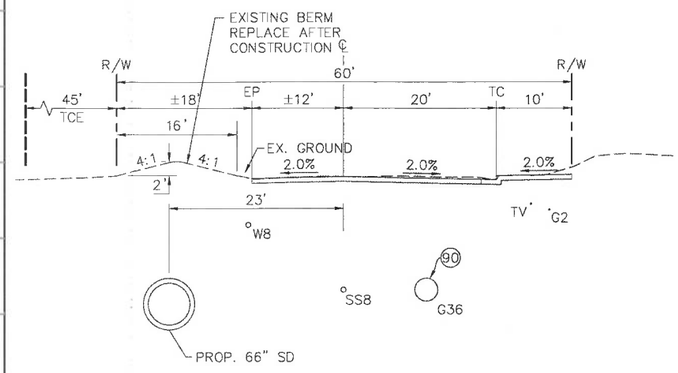
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LINE "H"
21+00.00 - 25+00.00

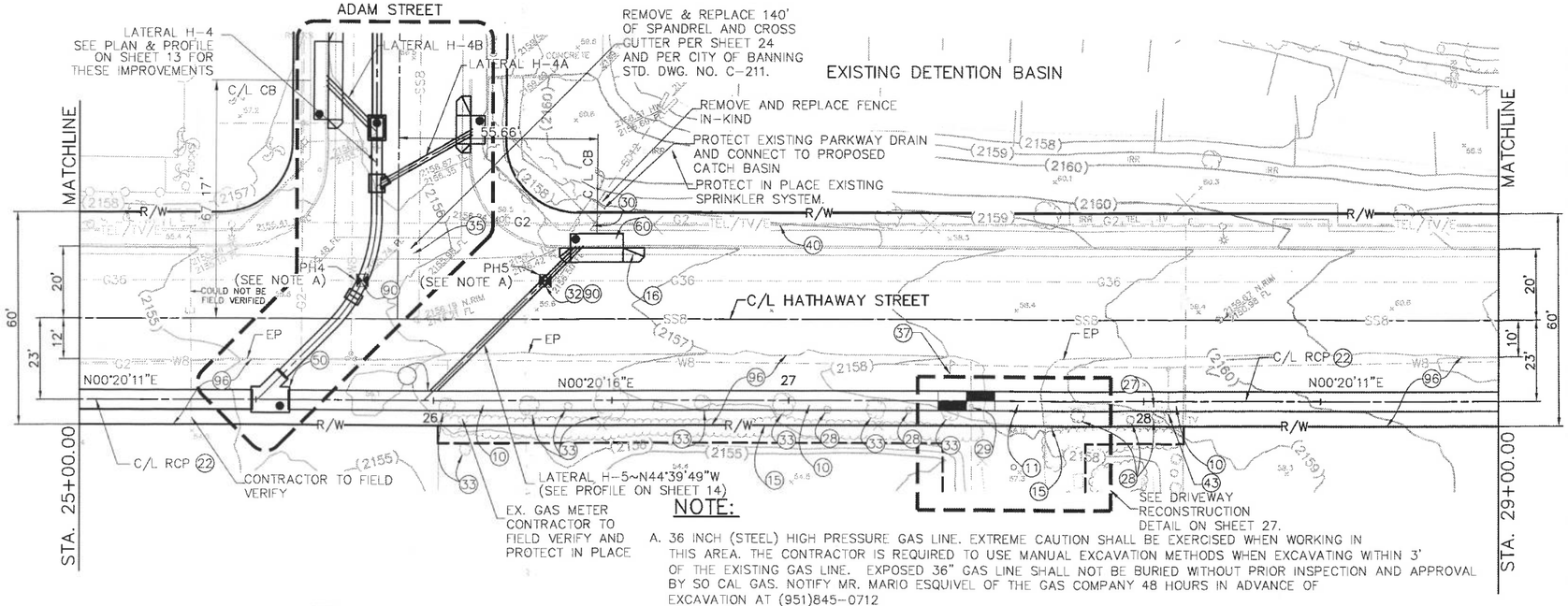
PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 5 OF 27





HATHAWAY STREET

STA. 27+50.00
SCALE 1"=10'



NOTE:

A. 36 INCH (STEEL) HIGH PRESSURE GAS LINE. EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING IN THIS AREA. THE CONTRACTOR IS REQUIRED TO USE MANUAL EXCAVATION METHODS WHEN EXCAVATING WITHIN 3' OF THE EXISTING GAS LINE. EXPOSED 36" GAS LINE SHALL NOT BE BURIED WITHOUT PRIOR INSPECTION AND APPROVAL BY SO CAL GAS. NOTIFY MR. MARIO ESQUIVEL OF THE GAS COMPANY 48 HOURS IN ADVANCE OF EXCAVATION AT (951)845-0712

CONSTRUCTION NOTES

(10) REMOVE EXISTING INTERFERING GRASS AND REPLACE IN KIND AFTER CONSTRUCTION.
(11) REMOVE INTERFERING PORTION OF DRIVEWAY AND REPLACE IN KIND AFTER CONSTRUCTION.
(15) REMOVE AND REINSTALL INTERFERING PORTIONS OF EXISTING WROUGHT IRON FENCE AND GATE.
(16) CONSTRUCT LOCAL DEPRESSION TYPE "B" PER RCFC & WCD STD. NO. LD201.
(22) CONSTRUCT 66" RCP (D-LOAD PER PROFILE).
(24) CONSTRUCT JUNCTION STRUCTURE NO. 4 PER STD. JS229.
(27) REMOVE EXISTING LANDSCAPE FEATURES
(28) REMOVE EXISTING SHRUBS
(29) REMOVE AND REINSTALL NEW WATER METER AND LATERAL AS DIRECTED BY THE ENGINEER AND PER CITY OF BANNING REQUIREMENTS AND STD. DWG. NO. W-7.
(30) CONNECT EXISTING PARKWAY DRAIN TO PROPOSED CATCH BASIN.
(32) CONSTRUCT CONCRETE COLLAR PER STD. DWG. NO. M803.
(33) FROM STATION 26+00 TO STATION 27+10 REMOVE AND DISPOSE OF ALL INTERFERING TREES WITHIN PUBLIC RIGHT-OF-WAY.
(35) REMOVE AND REPLACE EXISTING CROSS GUTTER PER CITY OF BANNING STD. DWG. NO. C-211.
(36) REMOVE INTERFERING PORTION OF EXISTING FENCE AND REPLACE IN KIND AFTER CONSTRUCTION.
(37) PROTECT EXISTING MAILBOX IN PLACE.
(40) PROTECT EXISTING TV/TEL/E IN PLACE.
(43) REMOVE AND REINSTALL NEW FIRE HYDRANT AS DIRECTED BY THE ENGINEER AND PER CITY OF BANNING STANDARD DRAWING NO. W-18. LOCATION TO BE DETERMINED BY THE CITY ENGINEER OR HIS FIELD REPRESENTATIVE.
(50) CONSTRUCT MANHOLE NO. 4 PER RCFC & WCD STD. NO. MH254. A=45°00'00", B=36", C=10.39', D_1=D_2=66", ELEV R=2141.72, ELEV S=2141.69
(60) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB100 WITH 18" OPENING IN THE BACK. W=14', V= 9.35'. 60'-18" RCP CLASS IV. SEE PROFILE H-5 ON SHEET 14.
(90) EXPOSED 36" GAS LINE SHALL NOT BE BURIED WITHOUT PRIOR INSPECTION AND APPROVAL BY SO CAL GAS. THE PIPELINE MUST BE BACKFILLED WITH SAND OR ZERO-SACK SLURRY ONLY WITHIN 3 FEET (HORIZONTAL AND VERTICAL) OF THE PIPELINE. NO MECHANICAL EQUIPMENT SHALL OPERATE WITHIN SAID 3 FEET OF PIPELINE.
(96) CONSTRUCT DIRT BERM 2' HIGH, 16' WIDE WITH 4:1 SIDE SLOPES AND AS DIRECTED BY THE ENGINEER.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

SEAL-ENGINEER
REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568
Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

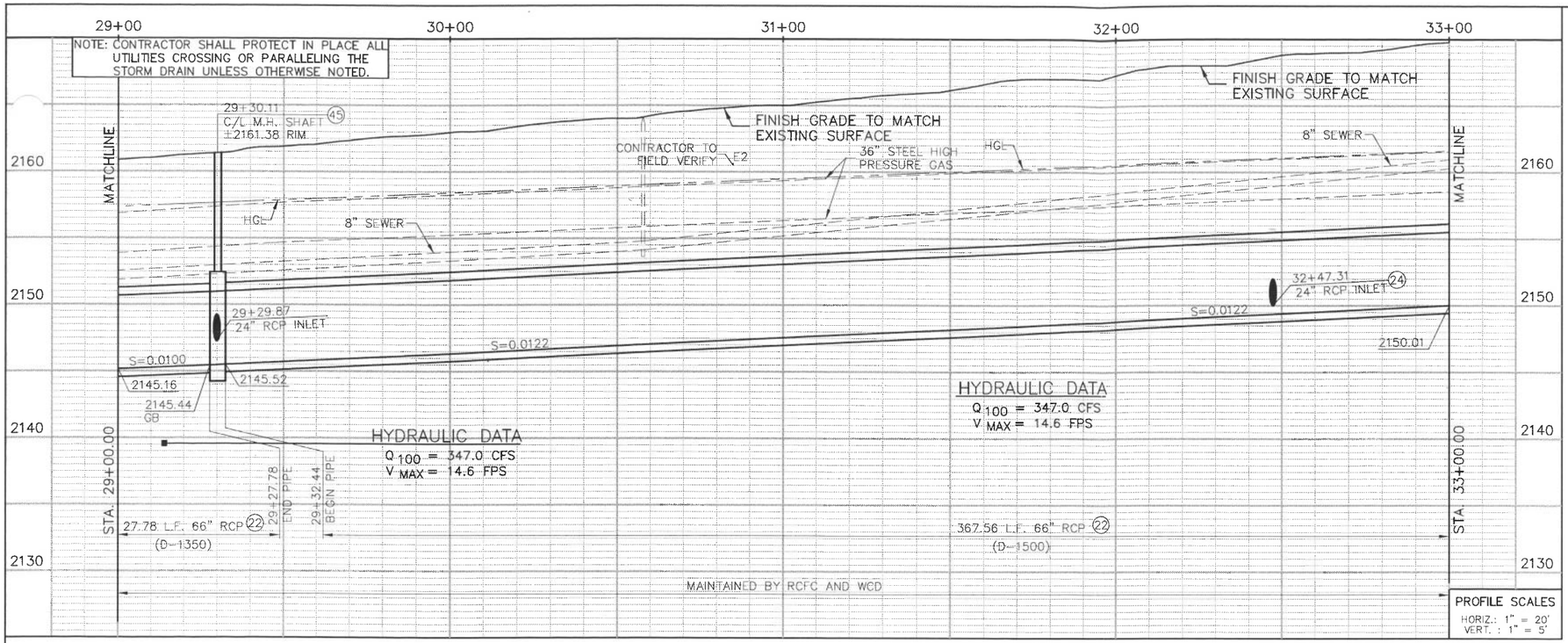
REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

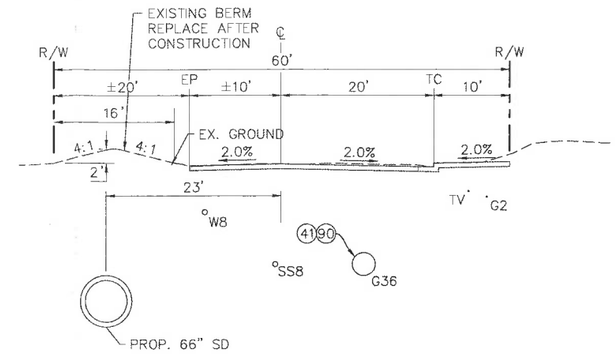
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE: 11/21/19
APPROVED BY: DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LINE "H"
25+00.00 - 29+00.00

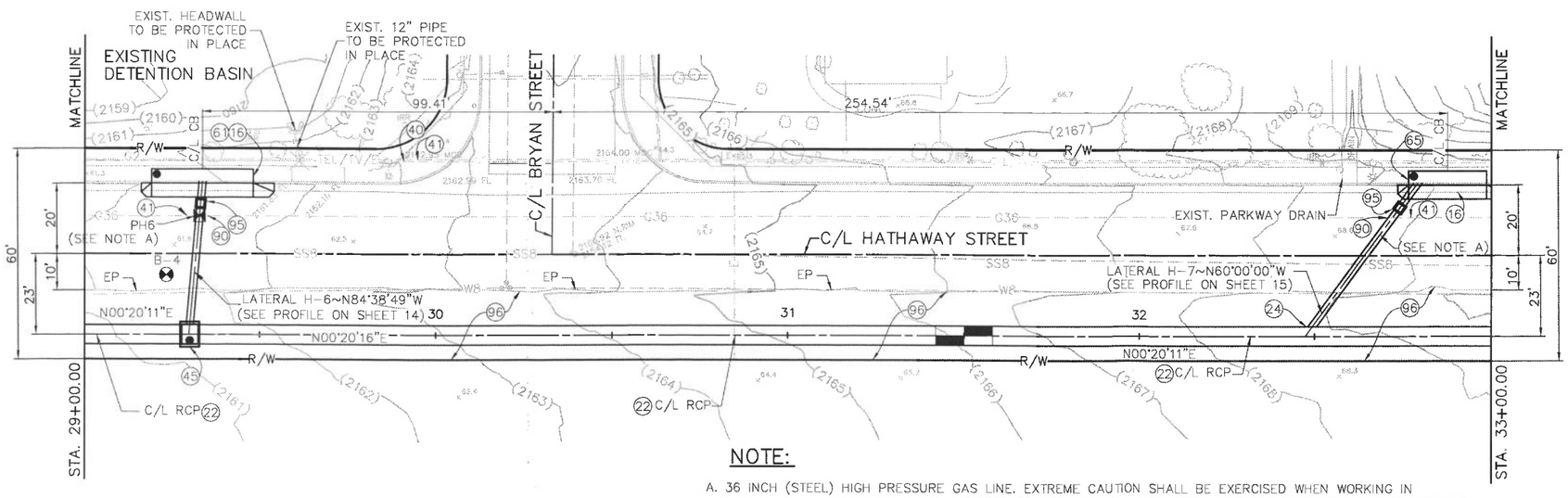
PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 6 OF 27





HATHAWAY STREET

STA. 31+50.00
SCALE 1"=10'



NOTE:

A. 36 INCH (STEEL) HIGH PRESSURE GAS LINE. EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING IN THIS AREA. THE CONTRACTOR IS REQUIRED TO USE MANUAL EXCAVATION METHODS WHEN EXCAVATING WITHIN 3' OF THE EXISTING GAS LINE. EXPOSED 36" GAS LINE SHALL NOT BE BURIED WITHOUT PRIOR INSPECTION AND APPROVAL BY SO CAL GAS. NOTIFY MR. MARIO ESQUIVEL OF THE GAS COMPANY 48 HOURS IN ADVANCE OF EXCAVATION AT (951)845-0712.

CONSTRUCTION NOTES

(16) CONSTRUCT LOCAL DEPRESSION TYPE "B" PER STD. NO. LD201.

(22) CONSTRUCT 66" RCP (D-LOAD PER PROFILE).

(24) CONSTRUCT JUNCTION STRUCTURE NO. 4 PER STD. NO. JS229.

(32) CONSTRUCT CONCRETE COLLAR PER STD. DWG. NO. M803.

(40) PROTECT EXISTING TEL/TV/E IN PLACE.

(41) PROTECT EXISTING GAS LINE IN PLACE.

(45) CONSTRUCT MANHOLE NO. 2 STD. NO. MH252; L=5.5, D_1=D_2=66", P=5".

(61) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO CB100. W=28', V=8.0', 41'-24" RCP CLASS IV, SEE PROFILE LATERAL H-6 ON SHEET 14.

(65) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO CB100. W=21', V=8.0', 53'-24" RCP CLASS IV, SEE PROFILE LATERAL H-7 ON SHEET 15.

(90) EXPOSED 36" GAS LINE SHALL NOT BE BURIED WITHOUT PRIOR INSPECTION AND APPROVAL BY SO CAL GAS. THE PIPELINE MUST BE BACKFILLED WITH SAND OR ZERO-SACK SLURRY ONLY WITHIN 3 FEET (HORIZONTAL AND VERTICAL) OF THE PIPELINE. NO MECHANICAL EQUIPMENT SHALL OPERATE WITHIN SAID 3 FEET OF PIPLEINE.

(95) CONSTRUCT TRANSITION STRUCTURE NO. 3 PER RCFC & WCD STD. NO. TS303. (NO LATERAL CONNECTION: A=B=C=ELEV. R=ELEV. S=N/A) D_1=D_2=24".

(96) CONSTRUCT DIRT BERM 2' HIGH, 16' WIDE WITH 4:1 SIDE SLOPES AND AS DIRECTED BY THE ENGINEER.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

20' 0 20'

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.
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SEAL-ENGINEER
REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568
JOSEPH L. CASTANEDA R.C.E. 59835 — 11/19/19 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

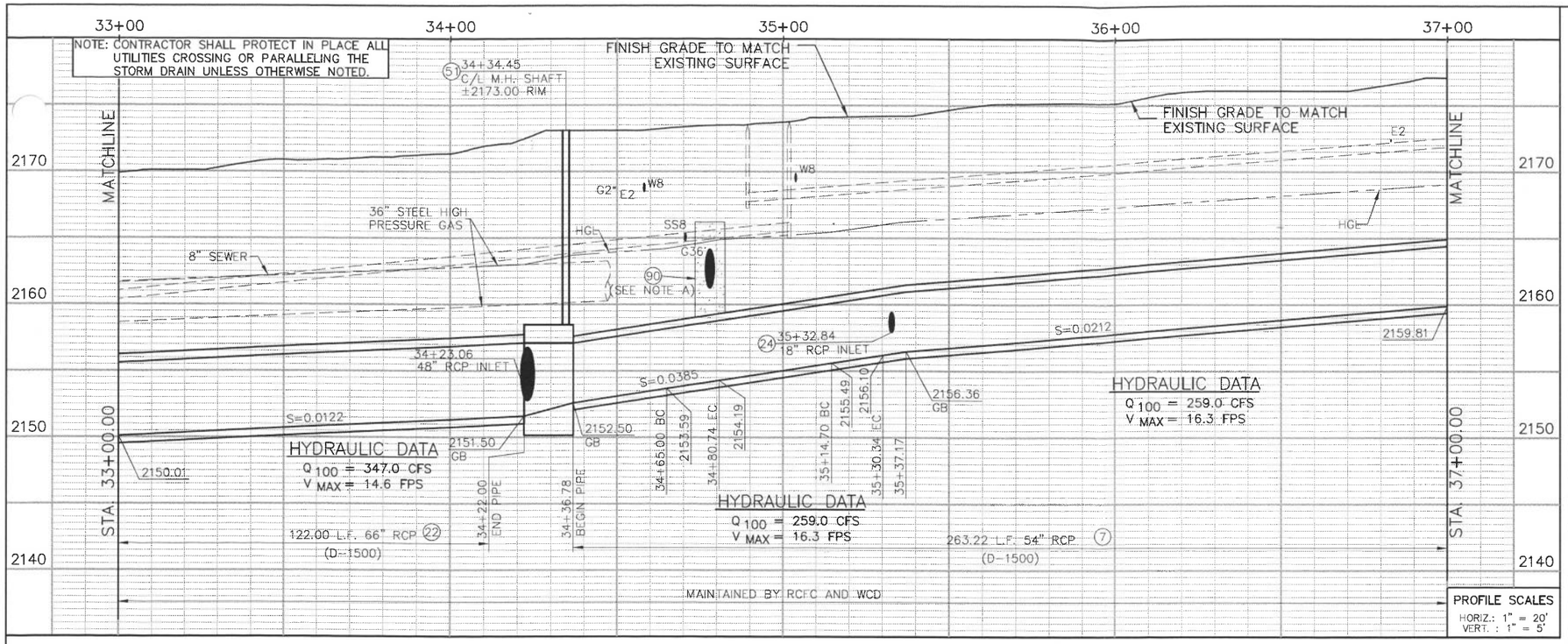
REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

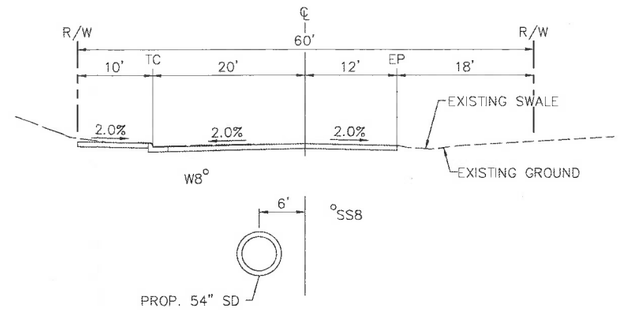
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LINE "H"
29+00.00 - 33+00.00

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 7 OF 27





HATHAWAY STREET
STA. 36+50.00
SCALE 1"=10'

CONSTRUCTION NOTES

(6) CONSTRUCT 48" RCP (D-LOAD PER PROFILE).

(7) CONSTRUCT 54" RCP (D-LOAD PER PROFILE).

(13) CONSTRUCT CONCRETE APRON PER DETAIL ON SHEET 20.

(14) CONSTRUCT 1' THICK CUTOFF WALL PER DETAIL ON SHEET 20.

(16) CONSTRUCT LOCAL DEPRESSION TYPE "B" PER STD. NO. LD201.

(17) CONSTRUCT MODIFIED CONCRETE DROP INLET PER RCFC & WCD STD. NO. CB110. W=10.16'; V=8.00'; A=4.00°. 27"-30" RCP CLASS IV, SEE PROFILE LATERAL H-8A ON SHEET 13, AND DETAIL ON SHEET 19.

(21) CONSTRUCT CONCRETE BULKHEAD PER RCFC & WCD STD. NO. M816.

(22) CONSTRUCT 66" RCP (D-LOAD PER PROFILE).

(24) CONSTRUCT JUNCTION STRUCTURE NO. 4 PER STD. JS229.

(32) CONSTRUCT CONCRETE COLLAR PER STD. DWG. NO. M803.

(35) REMOVE AND REPLACE EXISTING CROSS GUTTER PER CITY OF BANNING STD. DWG. NO. C-211.

(40) PROTECT TEL/TV/E LINE IN PLACE.

(42) CONSTRUCT CONCRETE APRON PER DETAIL PER SHEET 19.

(51) CONSTRUCT MANHOLE NO. 4 PER RCFC & WCD STD. NO. MH254. A=30°00'00", B=48", C=15.17', D_1=66", D_2=54", ELEV R= 2153.22, ELEV S=2152.67.

(55) CONSTRUCT TRANSITION STRUCTURE NO. 3 PER RCFC & WCD STD. NO. TS303.
LAT H-8B: A_1=60°00'00", B_1=24", C_1=5.06' ELEV S_1= 2160.93, R_1=2162.02. D_1=D_2=48".
LAT H-8A: A_2=77°52'01", B_2=30", C_2=3.75, ELEV S_2=2160.29, ELEV R_2=2160.53.

(57) CONSTRUCT TRANSITION STRUCTURE NO. 3 PER RCFC & WCD STD. NO. TS303. (NO LATERAL CONNECTION: A=B=C=ELEV. R=ELEV. S=N/A) D_1=D_2=30".

(58) REMOVE AND REINSTALL NEW AIR RELEASE VALVE AS DIRECTED BY THE ENGINEER AND PER CITY OF BANNING STANDARD DRAWING NO. W-15. LOCATION TO BE DETERMINED BY THE CITY ENGINEER OR HIS FIELD REPRESENTATIVE.

(66) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB100. W=21'; V=7.5', 36'-24" RCP CLASS IV, SEE PROFILE CP H-8B ON SHEET 13.

(69) CONSTRUCT MODIFIED CONCRETE DROP INLET PER RCFC & WCD STD. NO. CB110. W=7.58'; V=8.00'. 47'-18" RCP CLASS IV, SEE PROFILE LATERAL H-9 ON SHEET 15 AND DETAIL ON SHEET 20.

(90) EXPOSED 36" GAS LINE SHALL NOT BE BURIED WITHOUT PRIOR INSPECTION AND APPROVAL BY SO CAL GAS. THE PIPELINE MUST BE BACKFILLED WITH SAND OR ZERO-SACK SLURRY ONLY WITHIN 3 FEET (HORIZONTAL AND VERTICAL) OF THE PIPELINE. NO MECHANICAL EQUIPMENT SHALL OPERATE WITHIN SAID 3 FEET OF PIPELINE.

(96) CONSTRUCT DIRT BERM 2' HIGH, 16' WIDE WITH 4:1 SIDE SLOPES AND AS DIRECTED BY THE ENGINEER.

(D) C/L CURVE DATA
Δ = 20°00'00"
R = 45.00'
T = 7.93'
L = 15.71'
BC = STA. 34+65.10
EC = STA. 34+80.81
PI = N 2277559.28
E 6376817.38

(E) C/L CURVE DATA
Δ = 20°00'05"
R = 45.00'
T = 7.94'
L = 15.71'
BC = STA. 35+14.70
EC = STA. 35+30.34
PI = N 2277606.09
E 6376800.66

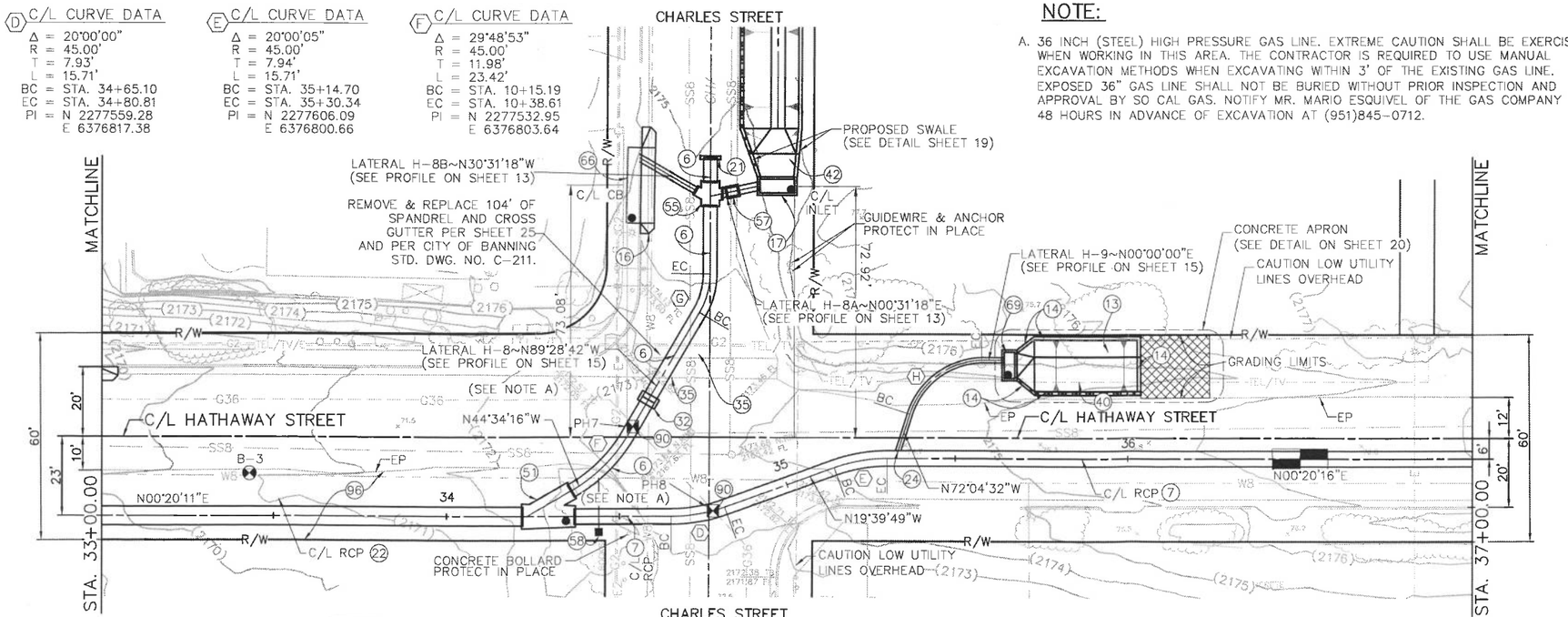
(F) C/L CURVE DATA
Δ = 29°48'53"
R = 45.00'
T = 11.98'
L = 23.42'
BC = STA. 10+15.19
EC = STA. 10+38.61
PI = N 2277532.95
E 6376803.64

(G) C/L CURVE DATA
Δ = 30°00'00"
R = 22.50'
T = 6.03'
L = 11.78'
BC = STA. 10+79.33
EC = STA. 10+91.11
PI = N 2277562.78
E 6376753.05

(H) C/L CURVE DATA
Δ = 72°04'32"
R = 22.50'
T = 16.37'
L = 28.30'
BC = STA. 10+13.49
EC = STA. 10+41.79
PI = N 2277625.73
E 6376772.31

NOTE:

A. 36 INCH (STEEL) HIGH PRESSURE GAS LINE. EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING IN THIS AREA. THE CONTRACTOR IS REQUIRED TO USE MANUAL EXCAVATION METHODS WHEN EXCAVATING WITHIN 3' OF THE EXISTING GAS LINE. EXPOSED 36" GAS LINE SHALL NOT BE BURIED WITHOUT PRIOR INSPECTION AND APPROVAL BY SO CAL GAS. NOTIFY MR. MARIO ESQUIVEL OF THE GAS COMPANY 48 HOURS IN ADVANCE OF EXCAVATION AT (951)845-0712.



CHARLES STREET

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.
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SEAL-ENGINEER

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568
Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
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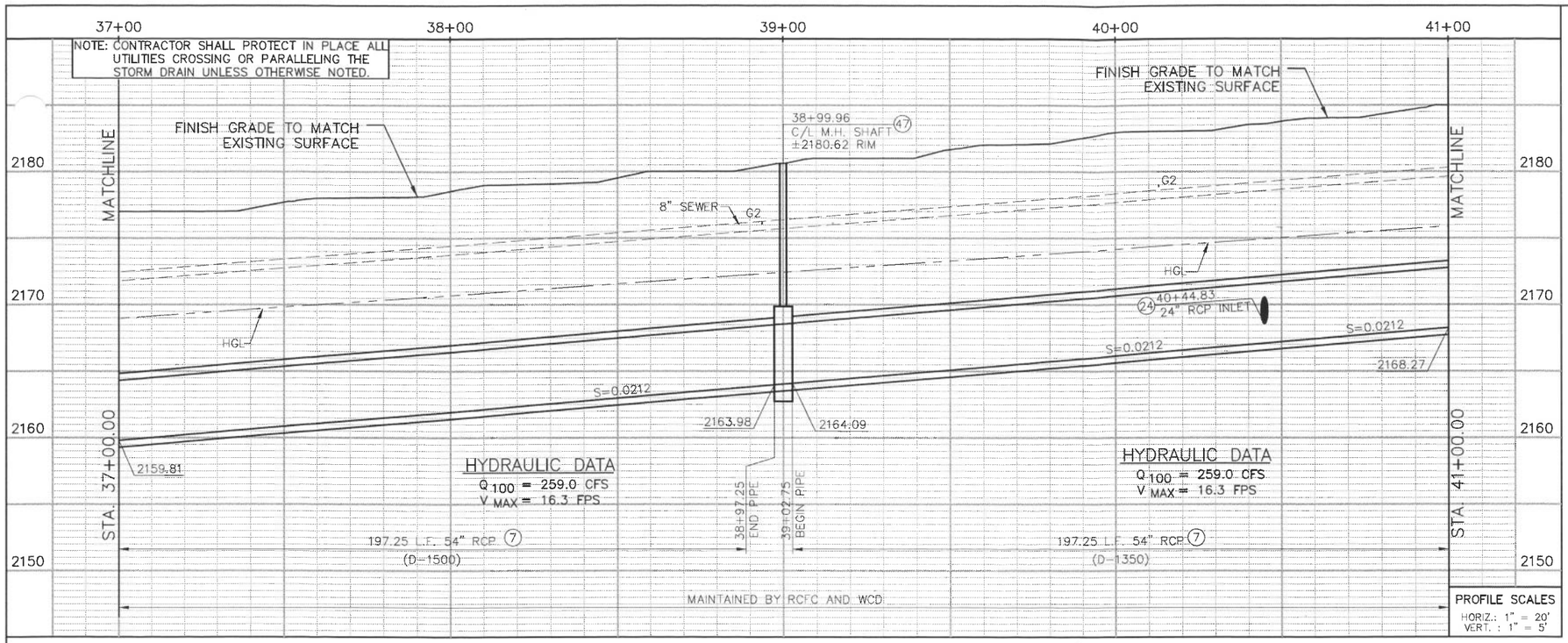
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE: 11/21/19
APPROVED BY: DATE: 11/25/19

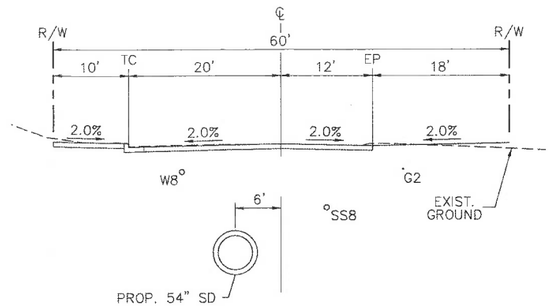
BANNING MDP LINE H
STAGE 1
LINE "H"
33+00.00 - 37+00.00

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 8 OF 27

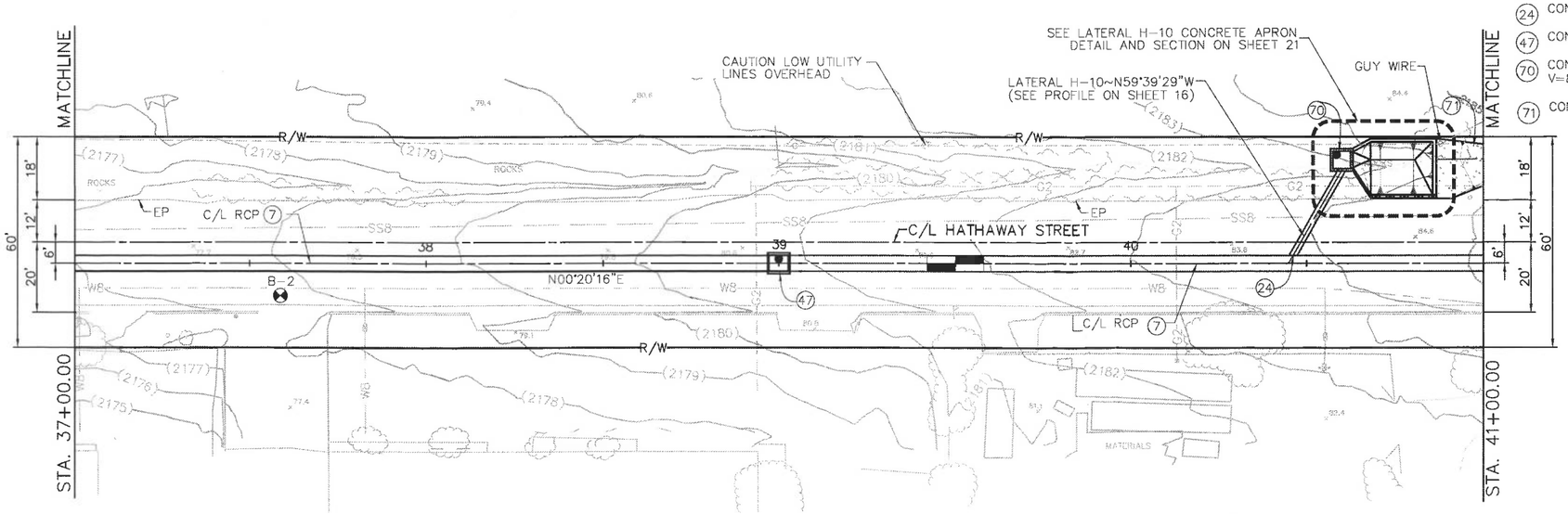
P8\228253

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019





HATHAWAY STREET
STA. 39+50.00
SCALE 1"=10'



CONSTRUCTION NOTES

(7) CONSTRUCT 54" RCP (D-LOAD PER PROFILE)

(24) CONSTRUCT JUNCTION STRUCTURE NO. 4 PER STD. JS229.

(47) CONSTRUCT MANHOLE NO. 2 PER RCFC & WCD STD. NO. MH252; L=7.3', $D_1=D_2=54"$.

(70) CONSTRUCT CONCRETE DROP INLET PER RCFC & WCD STD. NO. CB110, W=5',H=1.63' V=8.00',A=5.00'. 26'-24" RCP CLASS IV. SEE PROFILE H-10 ON SHEET 16 & DETAIL ON SHEET 21.

(71) CONSTRUCT 4" OF AC PAVEMENT OVER 6" OF BASE.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

20' 0 20'

Don't Dig...Until You Call U.S.A. Toll Free
1-800-227-2600
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REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
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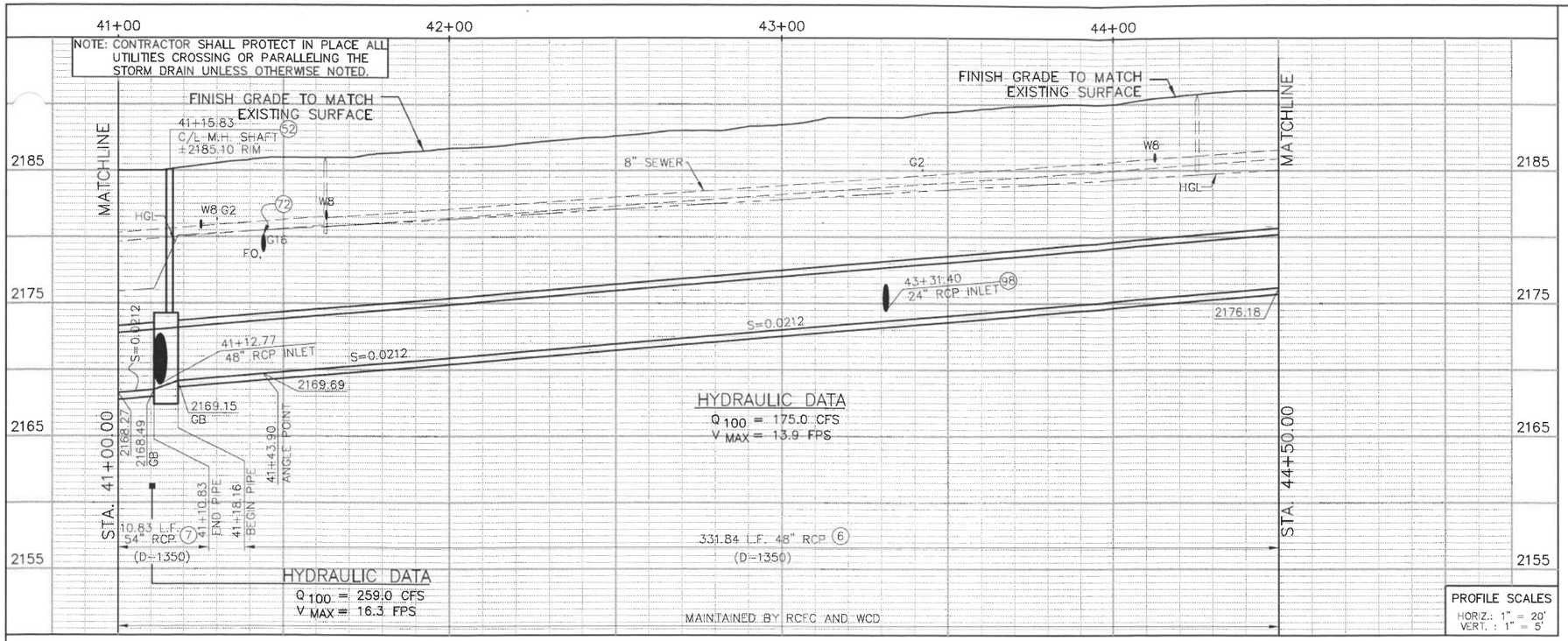
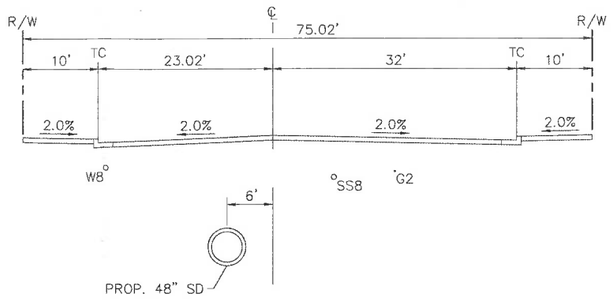
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LINE "H"
37+00.00 - 41+00.00

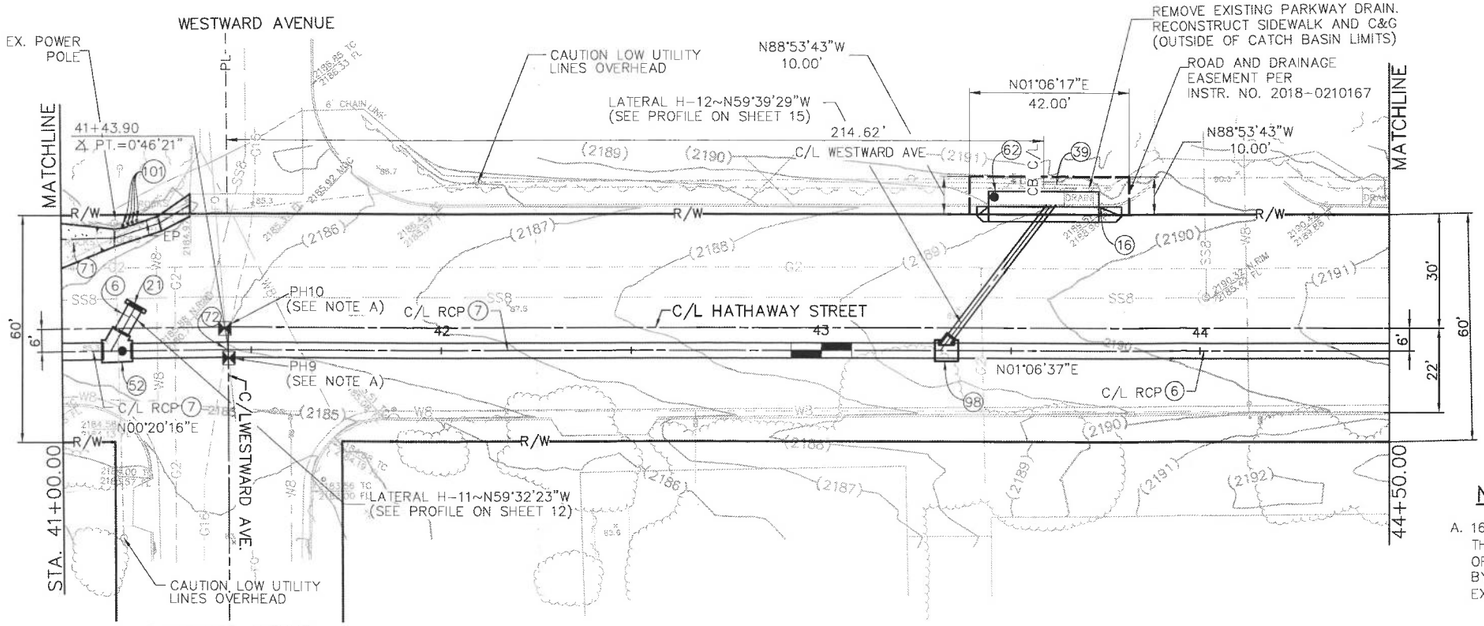
PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 9 OF 27





HATHAWAY STREET

STA. 43+00.00
SCALE 1"=10'



CONSTRUCTION NOTES

(6) CONSTRUCT 48" RCP (D-LOAD PER PROFILE).

(7) CONSTRUCT 54" RCP (D-LOAD PER PROFILE).

(16) CONSTRUCT LOCAL DEPRESSION TYPE "B" PER STD. LD201.

(21) CONSTRUCT CONCRETE BULKHEAD PER RCFC & WCD STD. NO. M816.

(39) PROTECT EXISTING FENCE IN PLACE.

(52) CONSTRUCT MANHOLE NO. 4 PER RCFC & WCD STD. NO. MH254, A=59°52'54", B=24", C=5.98', D_1=54" D_2=48", ELEV R= 2169.55, ELEV S=2169.08.

(62) CONSTRUCT CATCH BASIN NO.1 PER RCFC & WCD STD. CB100 WITH OPENING IN BACK. W=28', V=6.5' 44'-24" RCP CLASS IV, SEE PROFILE H-12 ON SHEET 15.

(71) CONSTRUCT 4" OF AC PAVEMENT OVER 6" OF BASE.

(72) QUESTAR SOUTHERN TRAILS PIPELINE MUST BE CONTACTED AT (801) 324-7718 A MINIMUM OF 2 BUSINESS DAYS IN ADVANCE OF CONSTRUCTION IN THE VICINITY OF THE PIPLINE SO ARRANGEMENTS CAN BE MADE FOR PERSONNEL TO BE ON SITE TO OBSERVE CONSTRUCTION ACTIVITY AND ENSURE IT IS COMPLETED IN A SAFE MANNER.

(98) CONSTRUCT JUNCTION STRUCTURE NO. 2 PER STD. JS227. A=52°59'51", B=24", C=4.86', D=48", E=3.67',F=1.93',G=1.71',L=4.11', ELEV R=2175.23, ELEV S=2174.76.

(101) CONSTRUCT OBJECT MARKERS PER CALTRANS STD. PLAN A73A, TYPE Q (CA).

NOTE:

A. 16 INCH (STEEL) HIGH PRESSURE GAS LINE. EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING IN THIS AREA. THE CONTRACTOR IS REQUIRED TO USE MANUAL EXCAVATION METHODS WHEN EXCAVATING WITHIN 3' OF THE EXISTING GAS LINE. EXPOSED 16" GAS LINE SHALL NOT BE BURIED WITHOUT PRIOR INSPECTION AND APPROVAL BY SO CAL GAS. NOTIFY MR. MARIO ESQUIVEL OF THE GAS COMPANY 48 HOURS IN ADVANCE OF EXCAVATION AT (951)845-0712.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

20' 0 20'

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.

TWO WORKING DAYS BEFORE YOU DIG

SEAL-ENGINEER
REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

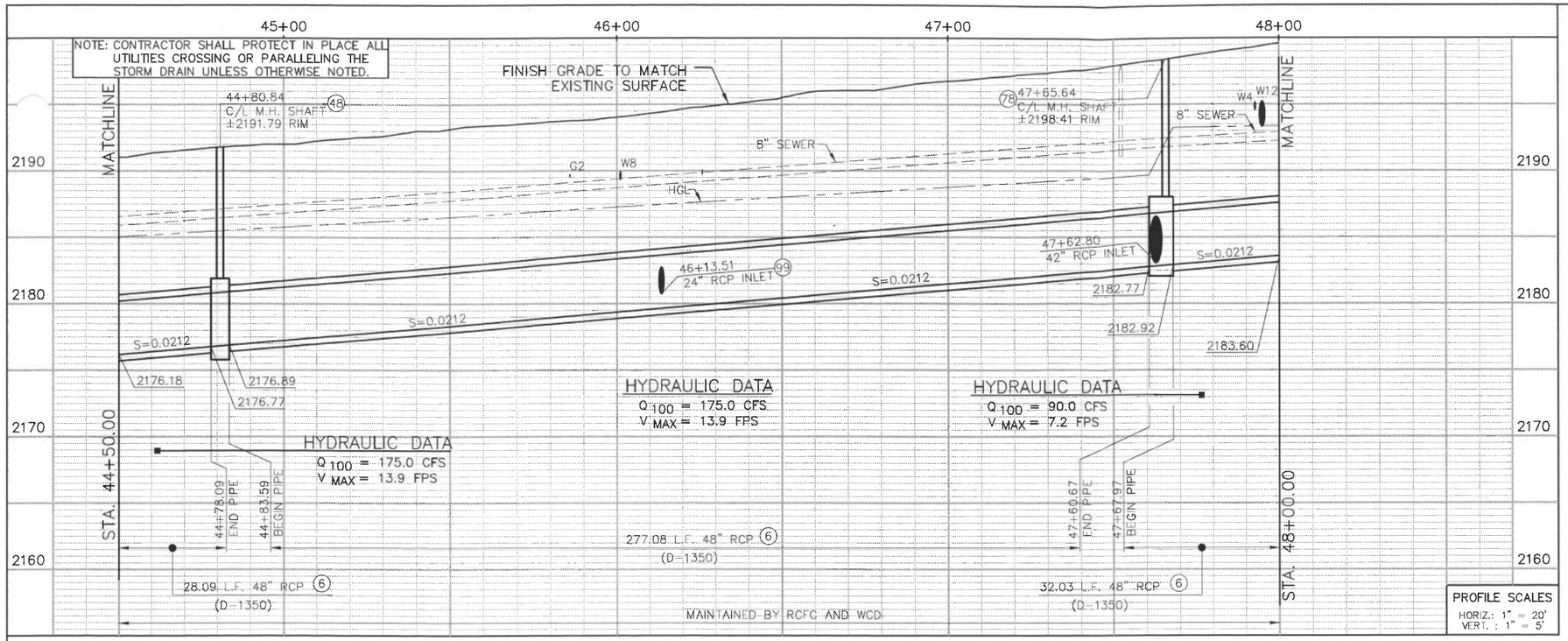
REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

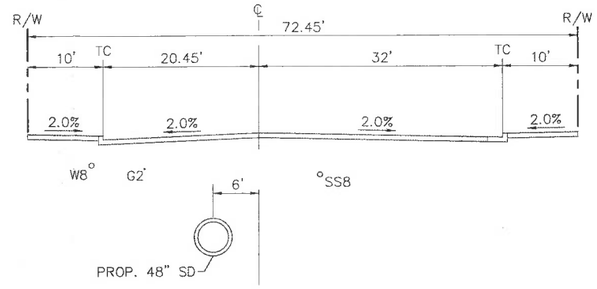
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LINE "H"
41+00.00 - 44+50.00

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 10 OF 27

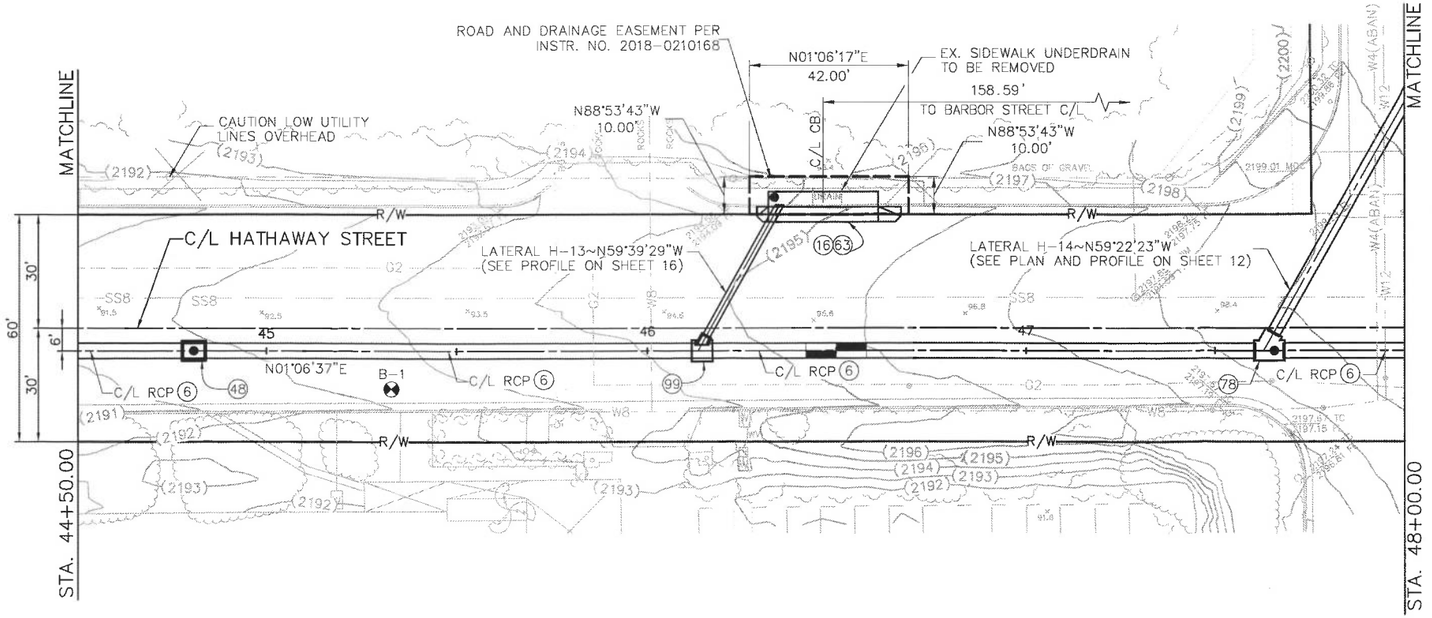


PROFILE SCALES
HORIZ.: 1" = 20'
VERT. : 1" = 5'



HATHAWAY STREET

STA. 46+50.00
SCALE 1"=10'



CONSTRUCTION NOTES

(6) CONSTRUCT 48" RCP (D-LOAD PER PROFILE).

(16) CONSTRUCT LOCAL DEPRESSION TYPE "B" PER RCFC & WCD STD. NO. LD201.

(48) CONSTRUCT MANHOLE NO. 2 PER RCFC & WCD STD. NO. MH252. L=7.33', D=48".

(63) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB100. W=28'.V=6.5'. 41'-24" RCP CLASS IV, SEE PROFILE H-13 ON SHEET 16.

(78) CONSTRUCT MANHOLE NO. 4 PER RCFC & WCD STD. NO. MH254. A=60°28'39", B=42", C=5.57', D_1=D_2=48", ELEV R= 2183.40, ELEV S=2183.00.

(99) CONSTRUCT JUNCTION STRUCTURE NO. 2 PER STD. JS227. A=60°46'06", B=24",C=4.65',D=48",E=2.81',F=1.60',G=1.74',L=3.54', ELEV R=2181.22, ELEV S=2180.74.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

N

20' 0 20'

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for the location of buried utility lines.
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SEAL-ENGINEER
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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG
FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
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ARTURO VELA
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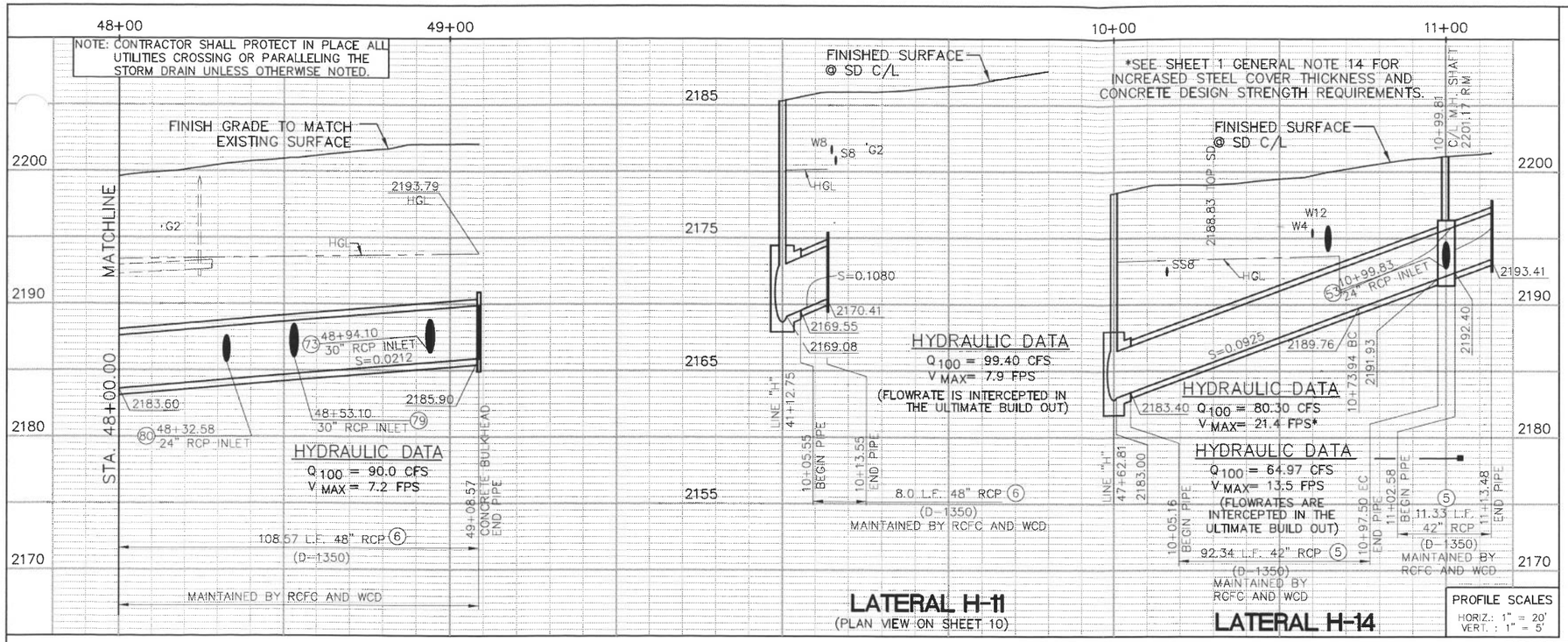
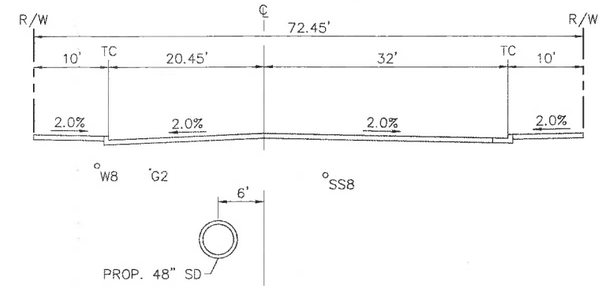
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE: 11/21/19
APPROVED BY: DATE: 11/25/19

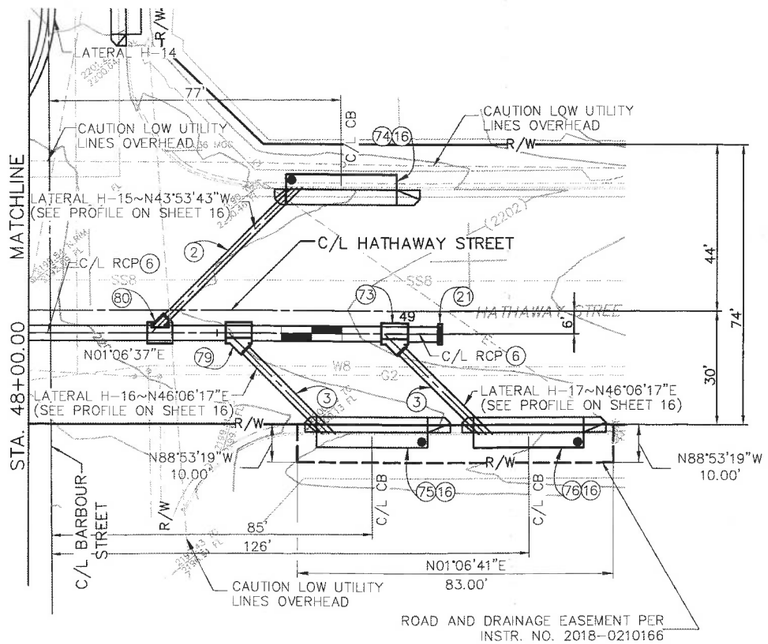
BANNING MDP LINE H
STAGE 1
LINE "H"
44+50.00 - 48+00.00

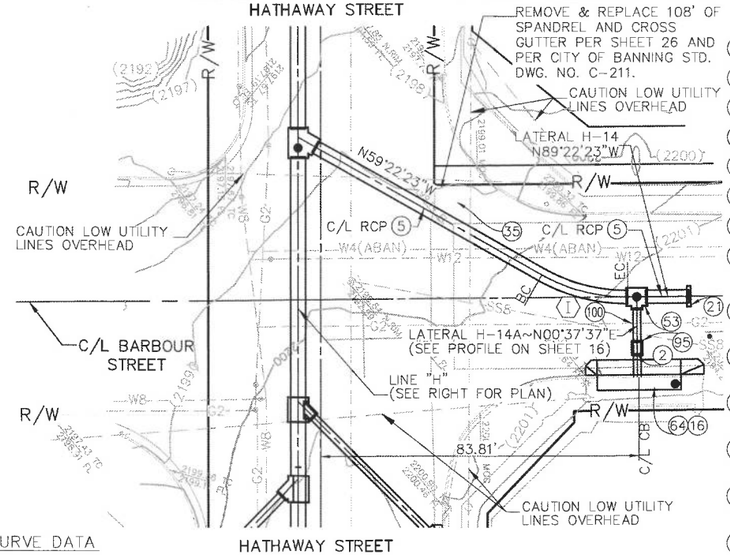
PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 11 OF 27





HATHAWAY STREET
STA. 48+75.00
SCALE 1"=10'





LATERAL H-14

C/L CURVE DATA
(1)
Δ = 30°00'00"
R = 45.00'
T = 12.06'
L = 23.56'
BC = STA. 10+73.94
EC = STA. 10+97.50
PI = N 2278890.18
E 6376742.31

CONSTRUCTION NOTES

(2) CONSTRUCT 24" RCP (D-LOAD PER PROFILE).
(3) CONSTRUCT 30" RCP (D-LOAD PER PROFILE).
(5) CONSTRUCT 42" RCP (D-LOAD PER PROFILE).
(6) CONSTRUCT 48" RCP (D-LOAD PER PROFILE).
(16) CONSTRUCT LOCAL DEPRESSION TYPE "B" PER RCFC & WCD STD. NO. LD201.
(21) CONSTRUCT CONCRETE BULKHEAD PER RCFC & WCD STD. NO. M816.
(35) REMOVE AND REPLACE EXISTING SPANDREL AND CROSS GUTTER PER CITY OF BANNING STD. DWG. NO. C-211.
(53) CONSTRUCT MANHOLE NO. 4 PER RCFC & WCD STD. NO. MH254. A=90°00'00", B=24", C=3.38', D_1=D_2=42", ELEV R= 2193.30, ELEV S=2192.73.
(64) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB100. W=21', V=5.7'. 16'-24" RCP CLASS IV, SEE PROFILE LATERAL H-14A ON SHEET 16.
(73) CONSTRUCT JUNCTION STRUCTURE NO. 2 PER RCFC & WCD STD. NO. JS227. A=45°00'00", B=30", C=6.53', D=48", E=4.91', F=1.18', G=1.87',L=4.95' ELEV R=2187.37, ELEV S=2186.34.
(74) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB100. W=28', V=7.35'. 50'-24" RCP CLASS IV, SEE PROFILE LATERAL H-15 ON SHEET 16.
(75) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB100. W=28', V=5.8'. 33'-30" RCP CLASS IV, SEE PROFILE LATERAL H-16 ON SHEET 16.
(76) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB100. W=28', V=6.7'. 33'-30" RCP CLASS IV, SEE PROFILE LATERAL H-17 ON SHEET 16.
(79) CONSTRUCT JUNCTION STRUCTURE NO. 2 PER RCFC & WCD STD. NO. JS227. A=45°00'00", B=30", C=6.52', D=48", E=4.91', F=1.18', G=1.86',L=4.95' ELEV R=2187.05, ELEV S=2185.98.
(80) CONSTRUCT JUNCTION STRUCTURE NO. 2 PER STD. JS227. A=45°00'20", B=24", C=5.95', D=48", E=4.51', F=0.96',G=1.76',L=4.57', ELEV R=2187.01, ELEV S=2185.98.
(95) CONSTRUCT TRANSISTION STRUCTURE NO. 3 PER RCFC & WCD STD. NO. TS303. (NO LATERAL CONNECTION: A=B=C=ELEV. R = ELEV S= N/A) D1=D2=24"
(100) CONSTRUCT SANITARY SEWER PROTECTION PER RCFC & WCD STD. DWG. NO. M807.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

20' 0 20'

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TWO WORKING DAYS BEFORE YOU DIG

SEAL-ENGINEER
REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA ND 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568
JOSEPH L. CASTANEDA R.C.E. 59835 DATE 11/19/19

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

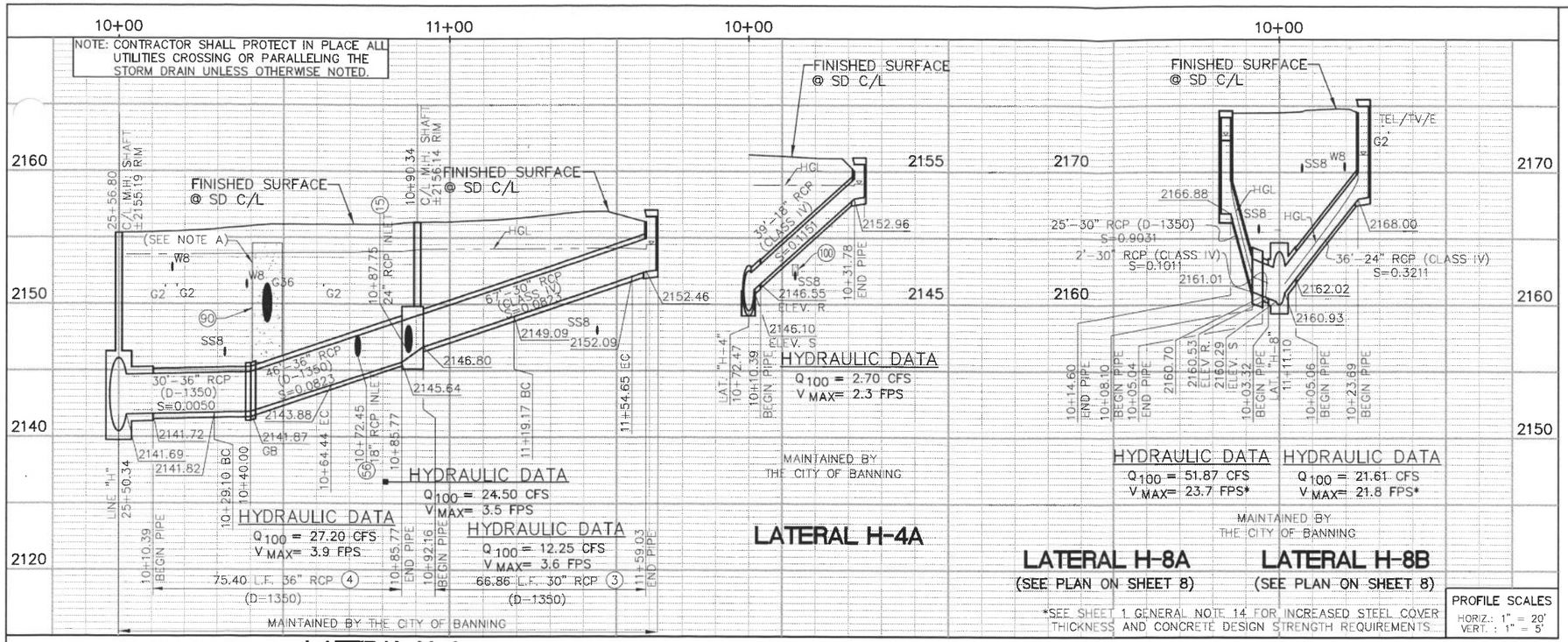
REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LINE "H"
48+00.00 – 49+08.57

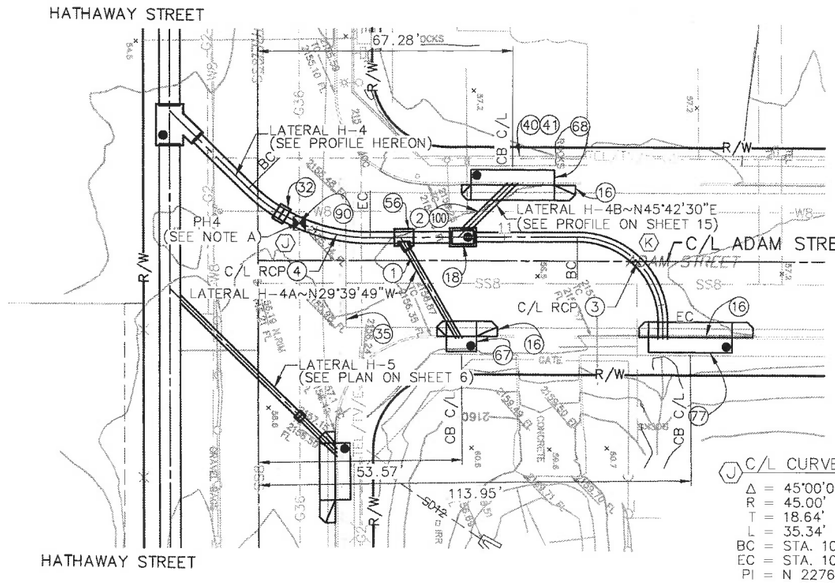
PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 12 OF 27



NOTE:

A. 36 INCH (STEEL) HIGH PRESSURE GAS LINE. EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING IN THIS AREA. THE CONTRACTOR IS REQUIRED TO USE MANUAL EXCAVATION METHODS WHEN EXCAVATING WITHIN 3' OF THE EXISTING GAS LINE. NOTIFY MR. MARIO ESQUIVEL OF THE GAS COMPANY 48 HOURS IN ADVANCE OF EXCAVATION AT (951)845-0712.

CAUTION:
36" GAS LINE LOCATED WITHIN WESLEY AND HATHAWAY STREET



(J) C/L CURVE DATA

Δ = 45°00'00"
R = 45.00'
T = 18.64'
L = 35.34'
BC = STA. 10+29.10
EC = STA. 10+64.44
PI = N 2276670.59
E 6376778.39

(K) C/L CURVE DATA

Δ = 90°22'19"
R = 22.50'
T = 22.65'
L = 35.49'
BC = STA. 11+19.17
EC = STA. 11+54.65
PI = N 2276671.16
E 6376682.38

CONSTRUCTION NOTES

(1) CONSTRUCT 18" RCP (D-LOAD PER PROFILE).
(2) CONSTRUCT 24" RCP (D-LOAD PER PROFILE).
(3) CONSTRUCT 30" RCP (D-LOAD PER PROFILE).
(4) CONSTRUCT 36" RCP (D-LOAD PER PROFILE).
(16) CONSTRUCT LOCAL DEPRESSION TYPE "B" PER STD. LD201.
(18) CONSTRUCT MANHOLE NO. 1 PER STD. NO. MH251; L=5.73', D1= 30', D2=36", P=4".
(32) CONSTRUCT CONCRETE COLLAR PER RCFC & WCD STD. NO. M803.
(35) REMOVE AND REPLACE EXISTING CROSS GUTTER PER CITY OF BANNING STD. DWG. NO. C-211.
(40) PROTECT TEL/TV/E IN PLACE.
(41) PROTECT EXISTING GAS LINE IN PLACE.
(56) CONSTRUCT JUNCTION STRUCTURE NO. 2 PER STD. JS227. A=60°00'00", B=18",C=3.84',D=36",E=2.81',F=0.71',G=1.49',L=3.11', ELEV R=2146.55, ELEV S=2146.10.
(67) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB100. W=7', V=3.10', 39'-18" RCP CLASS IV, SEE PROFILE LATERAL H-4A HEREON.
(68) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB100. W=21', V=6.0', 20'-24" RCP CLASS IV, SEE PROFILE LATERAL H-4B ON SHEET 15.
(77) CONSTRUCT CATCH BASIN NO. 1 PER RCFC & WCD STD. NO. CB100. W=21', V=4.63', 76'-36" RCP D-1350, & 67'-30" RCP CLASS IV, SEE PROFILE LATERAL H-7 ON SHEET 15.
(90) EXPOSED 36" GAS LINE SHALL NOT BE BURIED WITHOUT PRIOR INSPECTION AND APPROVAL BY SO CAL GAS. THE PIPELINE MUST BE BACKFILLED WITH SAND AND ZERO-SACK SLURRY ONLY. NO MECHANICAL EQUIPMENT SHALL OPERATE WITHIN 3 FEET OF THE PIPELINE.
(100) CONSTRUCT SANITARY SEWER PROTECTION PER RCFC & WCD STD. DWG. NO. M807.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

20' 0 20'

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG
FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

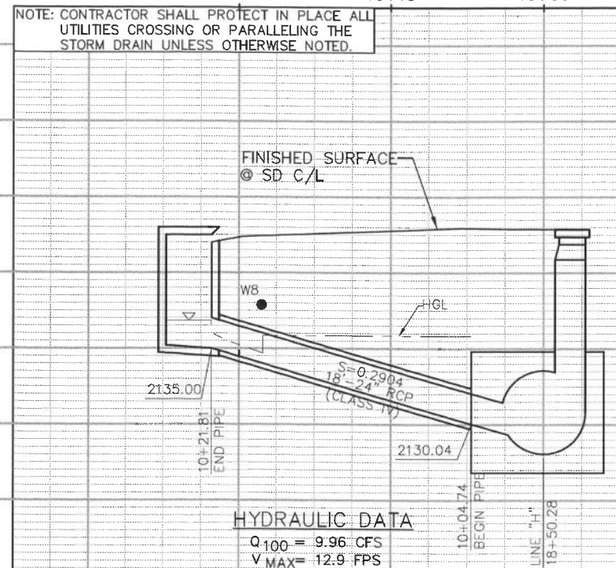
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LATERAL "H-3"
10+00.00 - 10+94.33

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 13 OF 27

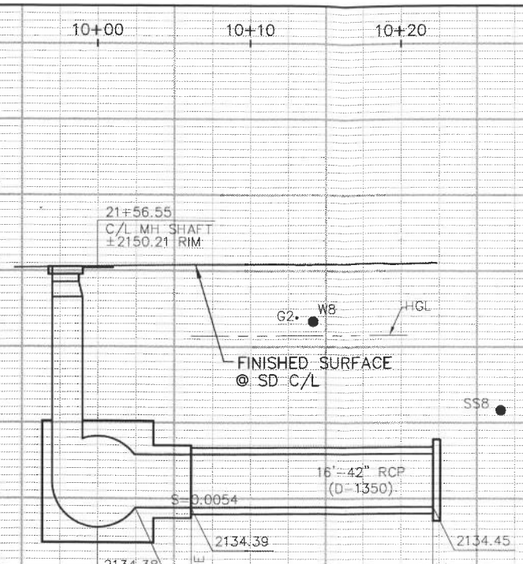
NOTE: UNLESS NOTED OTHERWISE, RCFC AND WCD WILL MAINTAIN ALL STORM DRAINS LARGER THAN 36". THE CITY OF BANNING WILL MAINTAIN ALL CATCH BASINS AND LATERALS 36" OR LESS IN DIAMETER.

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



HYDRAULIC DATA
Q_{100} = 9.96 CFS
V_{MAX}= 12.9 FPS
(FLOWRATE IS INTERCEPTED IN THE ULTIMATE BUILD OUT)

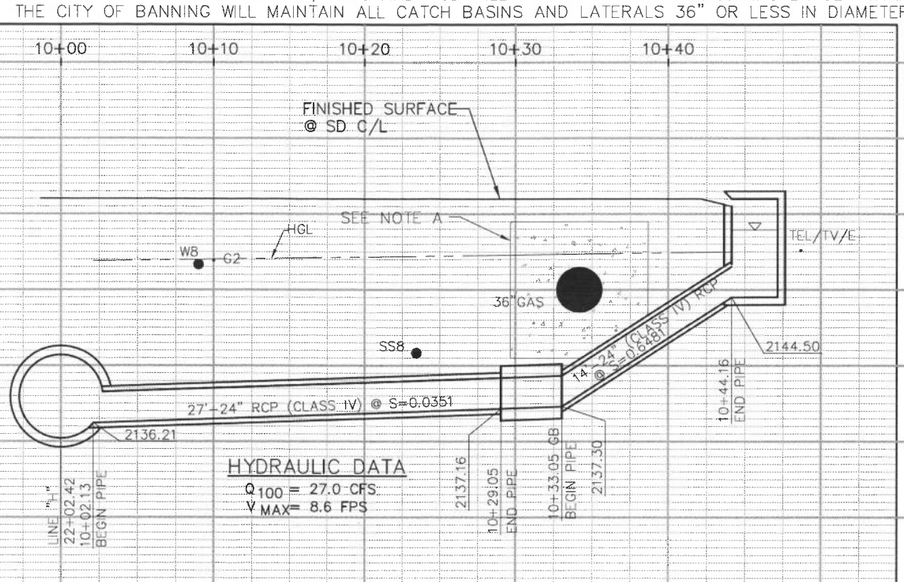
LATERAL H-1
(SEE PLAN ON SHEET 4)



HYDRAULIC DATA
Q_{100} = 70.30 CFS
V_{MAX}= 7.3 FPS

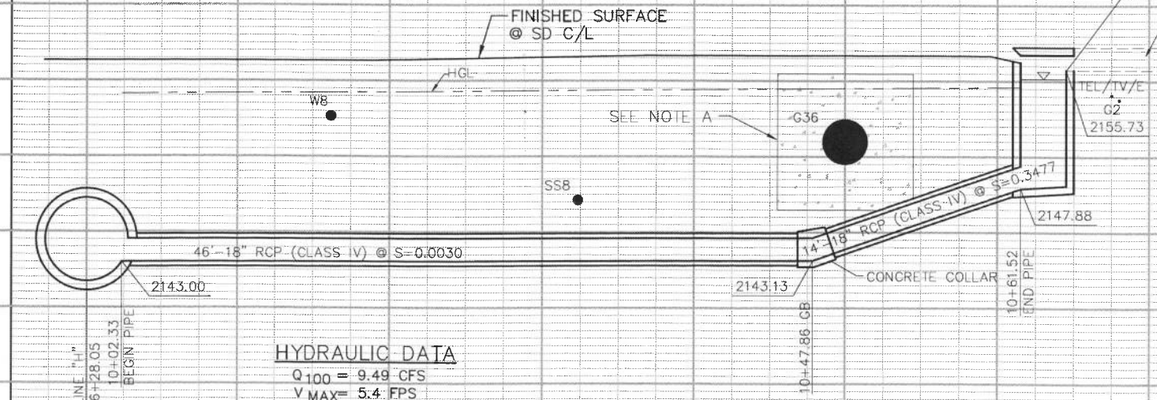
LATERAL H-2
(SEE PLAN ON SHEET 5)

(FLOWRATE IS INTERCEPTED IN THE ULTIMATE BUILD OUT)



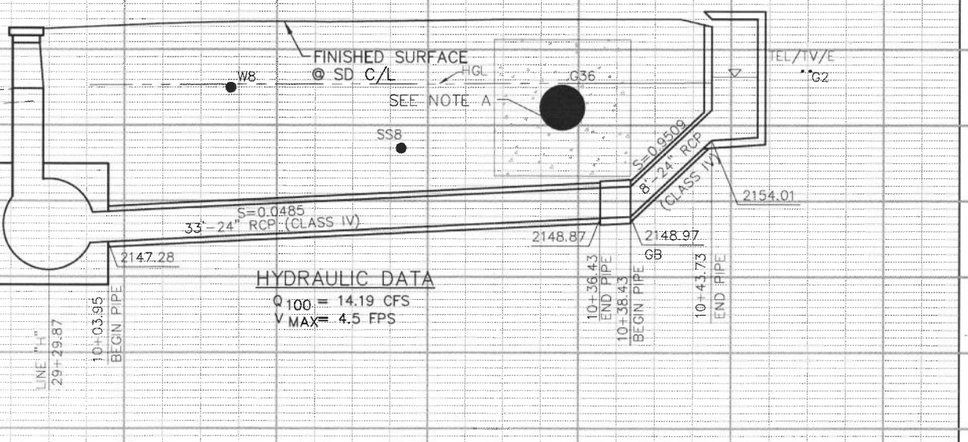
HYDRAULIC DATA
Q_{100} = 27.0 CFS
V_{MAX}= 8.6 FPS

LATERAL H-3
(SEE PLAN ON SHEET 5)



HYDRAULIC DATA
Q_{100} = 9.49 CFS
V_{MAX}= 5.4 FPS

LATERAL H-5
(SEE PLAN ON SHEET 6)



HYDRAULIC DATA
Q_{100} = 14.19 CFS
V_{MAX}= 4.5 FPS

LATERAL H-6
(SEE PLAN ON SHEET 7)

NOTE:

A. 36 INCH (STEEL) HIGH PRESSURE GAS LINE. EXTREME CAUTION SHALL BE EXERCISED WHEN WORKING IN THIS AREA. THE CONTRACTOR IS REQUIRED TO USE MANUAL EXCAVATION METHODS WHEN EXCAVATING WITHIN 3' OF THE EXISTING GAS LINE. EXPOSED 36" GAS LINE SHALL NOT BE BURIED WITHOUT PRIOR INSPECTION AND APPROVAL BY SO CAL GAS. NOTIFY MR. MARIO ESQUIVEL OF THE GAS COMPANY 48 HOURS IN ADVANCE OF EXCAVATION AT (951)845-0712.

5' 0 5'

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV= 2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

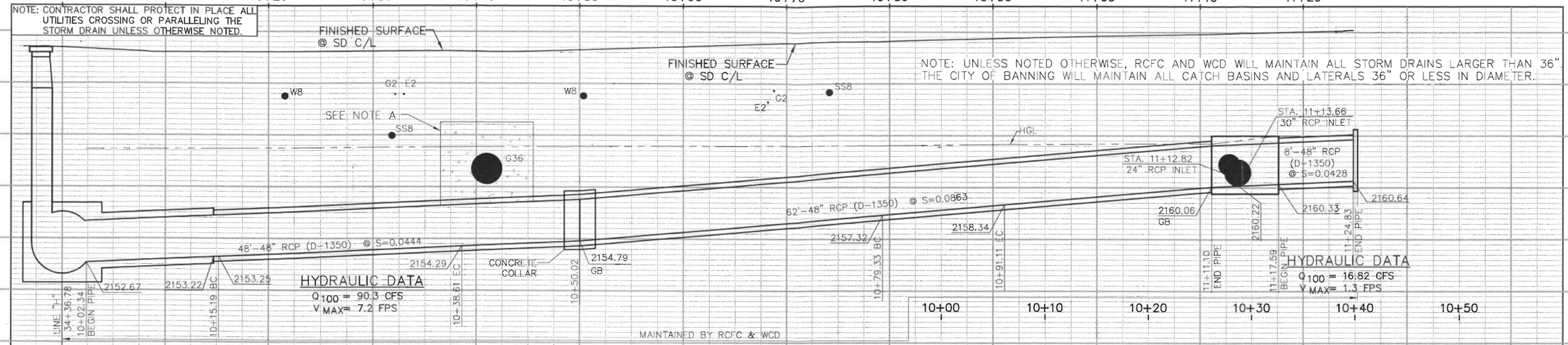
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE: 11/21/19
APPROVED BY: DATE: 11/25/19

BANNING MDP LINE H STAGE 1
LATERAL PROFILES

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 14 OF 27

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



NOTE: UNLESS NOTED OTHERWISE, RCFC AND WCD WILL MAINTAIN ALL STORM DRAINS LARGER THAN 36". THE CITY OF BANNING WILL MAINTAIN ALL CATCH BASINS AND LATERALS 36" OR LESS IN DIAMETER.

NOTE:

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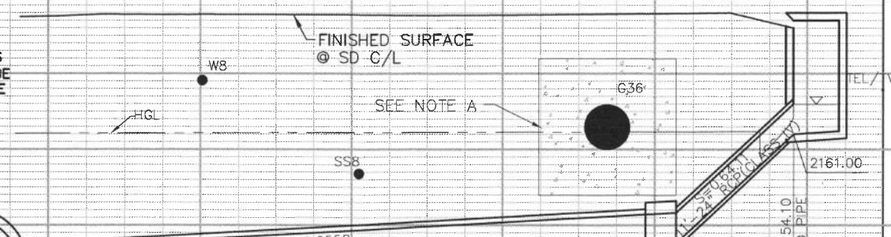
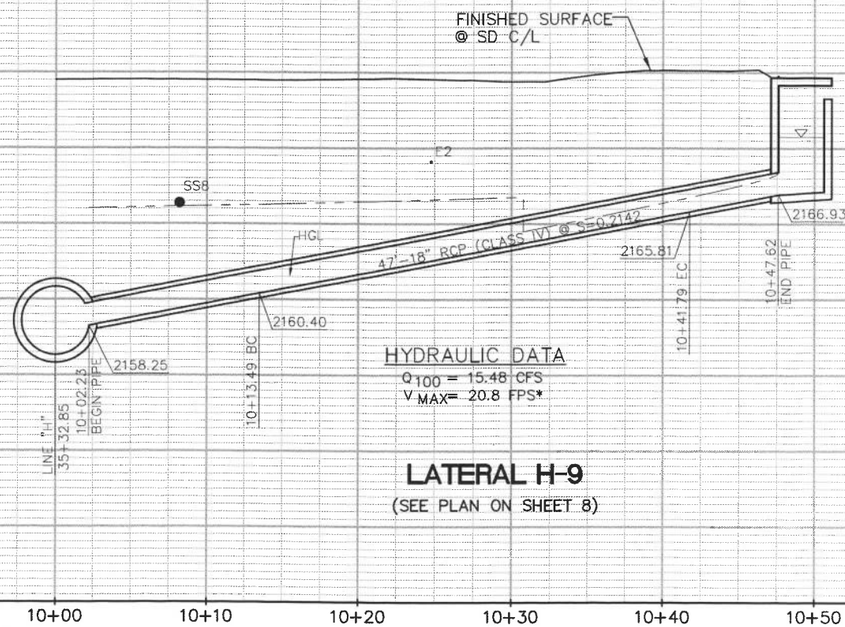
LATERAL H-8

(SEE PLAN ON SHEET 8)



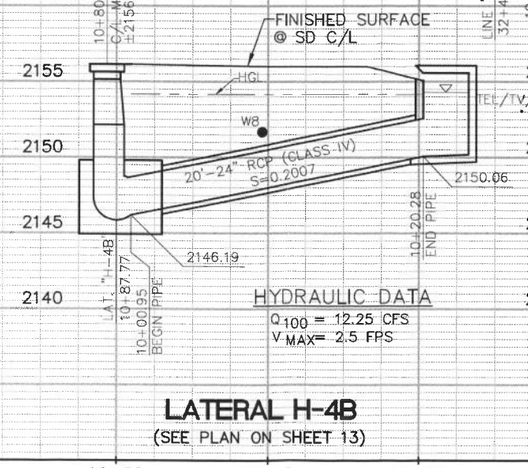
LATERAL H-7

(SEE PLAN ON SHEET 7)



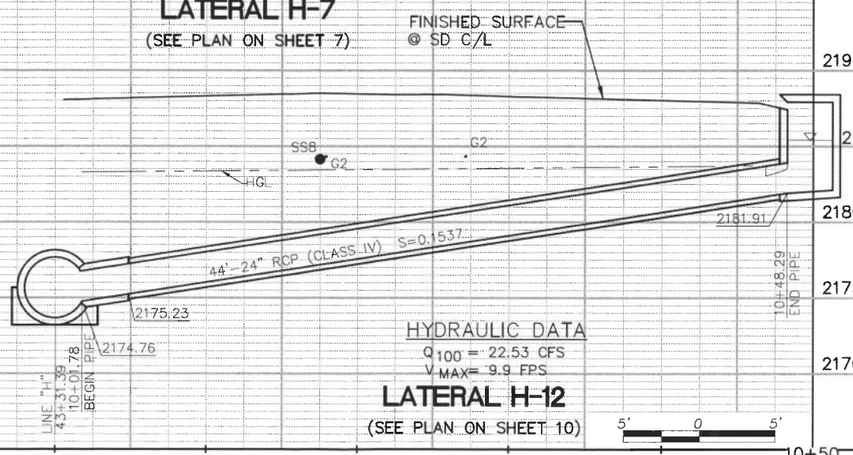
LATERAL H-9

(SEE PLAN ON SHEET 8)



LATERAL H-4B

(SEE PLAN ON SHEET 13)



LATERAL H-12

(SEE PLAN ON SHEET 10)

5' 0 5'

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

*SEE SHEET 1 GENERAL NOTE 14 FOR REQUIRED STEEL COVER THICKNESS AND CONCRETE DESIGN STRENGTH REQUIREMENTS

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.

TWO WORKING DAYS BEFORE YOU DIG

SEAL-ENGINEER

REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

JLC Engineering & Consulting, Inc.
41660 IVY STREET SUITE A MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568
Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

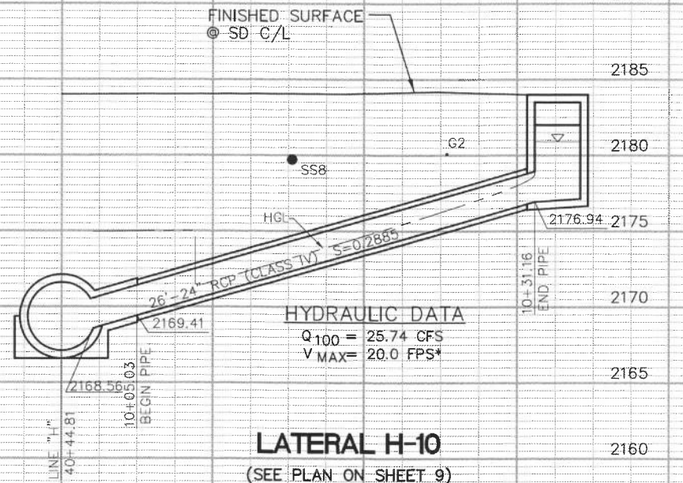
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H STAGE 1 LATERAL PROFILES

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 15 OF 27

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



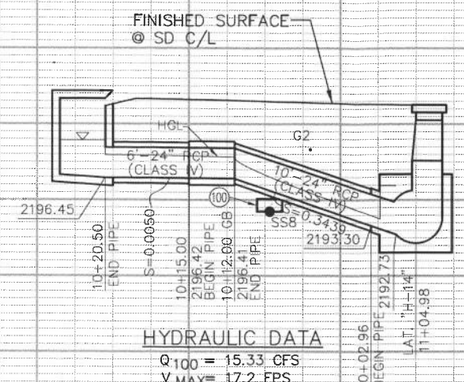
HYDRAULIC DATA
Q_{100} = 25.74 CFS
V_{MAX}= 20.0 FPS*

LATERAL H-10

(SEE PLAN ON SHEET 9)

*SEE SHEET 1 GENERAL NOTE 14 FOR INCREASED STEEL COVER THICKNESS AND CONCRETE DESIGN STRENGTH REQUIREMENTS

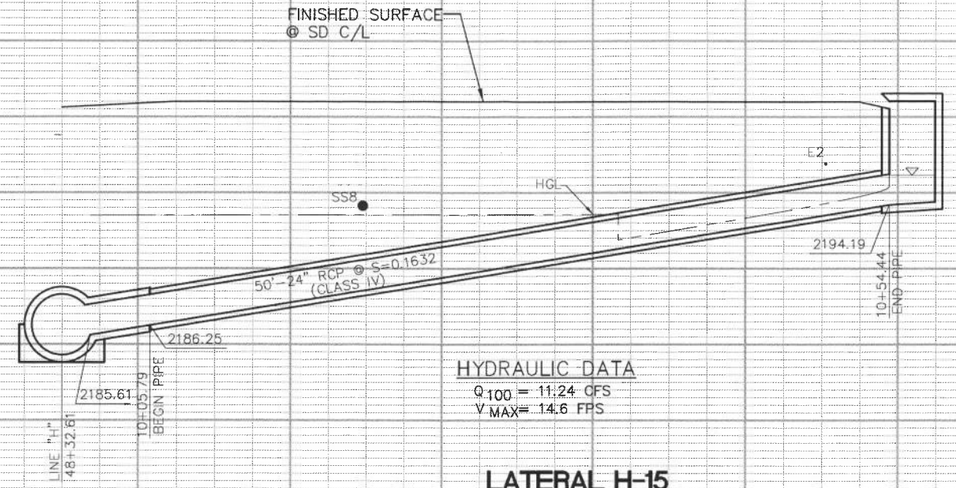
NOTE: UNLESS NOTED OTHERWISE, RCFC AND WCD WILL MAINTAIN ALL STORM DRAINS LARGER THAN 36". THE CITY OF BANNING WILL MAINTAIN ALL CATCH BASINS AND LATERALS 36" OR LESS IN DIAMETER.



HYDRAULIC DATA
Q_{100} = 15.33 CFS
V_{MAX}= 17.2 FPS

LATERAL H-14A

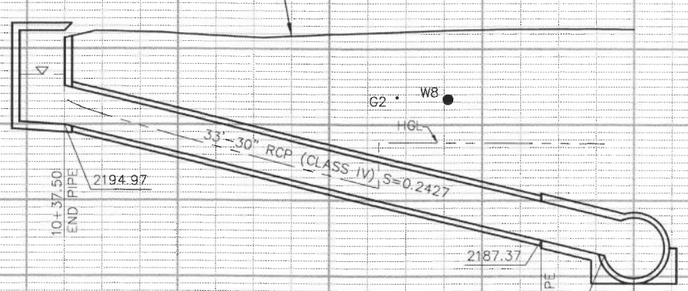
(SEE PLAN ON SHEET 12)



HYDRAULIC DATA
Q_{100} = 11.24 CFS
V_{MAX}= 14.6 FPS

LATERAL H-15

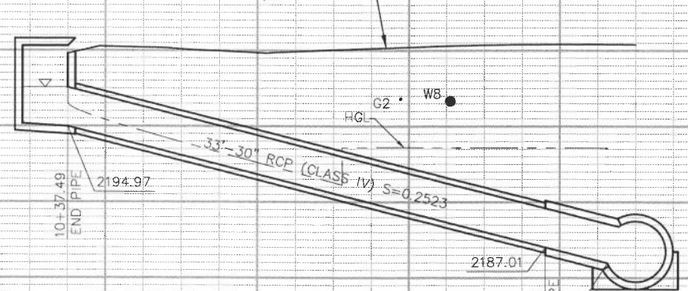
(SEE PLAN ON SHEET 12)



HYDRAULIC DATA
Q_{100} = 29.00 CFS
V_{MAX}= 19.7 FPS

LATERAL H-17

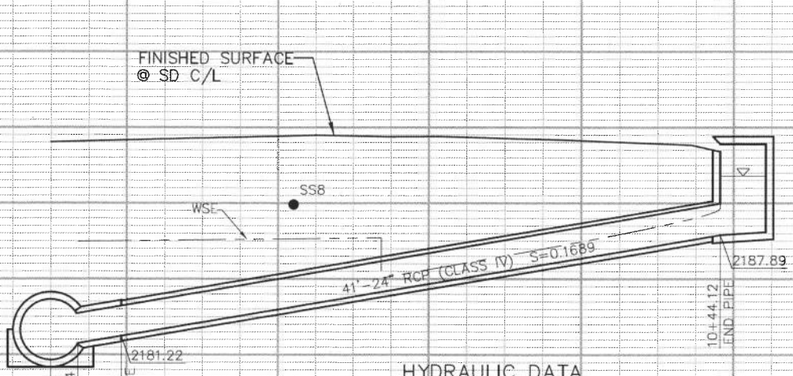
(SEE PLAN ON SHEET 12)



HYDRAULIC DATA
Q_{100} = 21.27 CFS
V_{MAX}= 18.5 FPS

LATERAL H-16

(SEE PLAN ON SHEET 12)



HYDRAULIC DATA
Q_{100} = 25.18 CFS
V_{MAX}= 17.8 FPS

LATERAL H-13

(SEE PLAN ON SHEET 11)

5' 0 5'

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

CONSTRUCTION NOTES

(100) CONSTRUCT SANITARY SEWER PROTECTION PER RCFC & WCD STD. DWG. NO. M807.

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.

TWO WORKING DAYS BEFORE YOU DIG

SEAL-ENGINEER

REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

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Joseph L. Castaneda 11/19/19

JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

CITY OF BANNING
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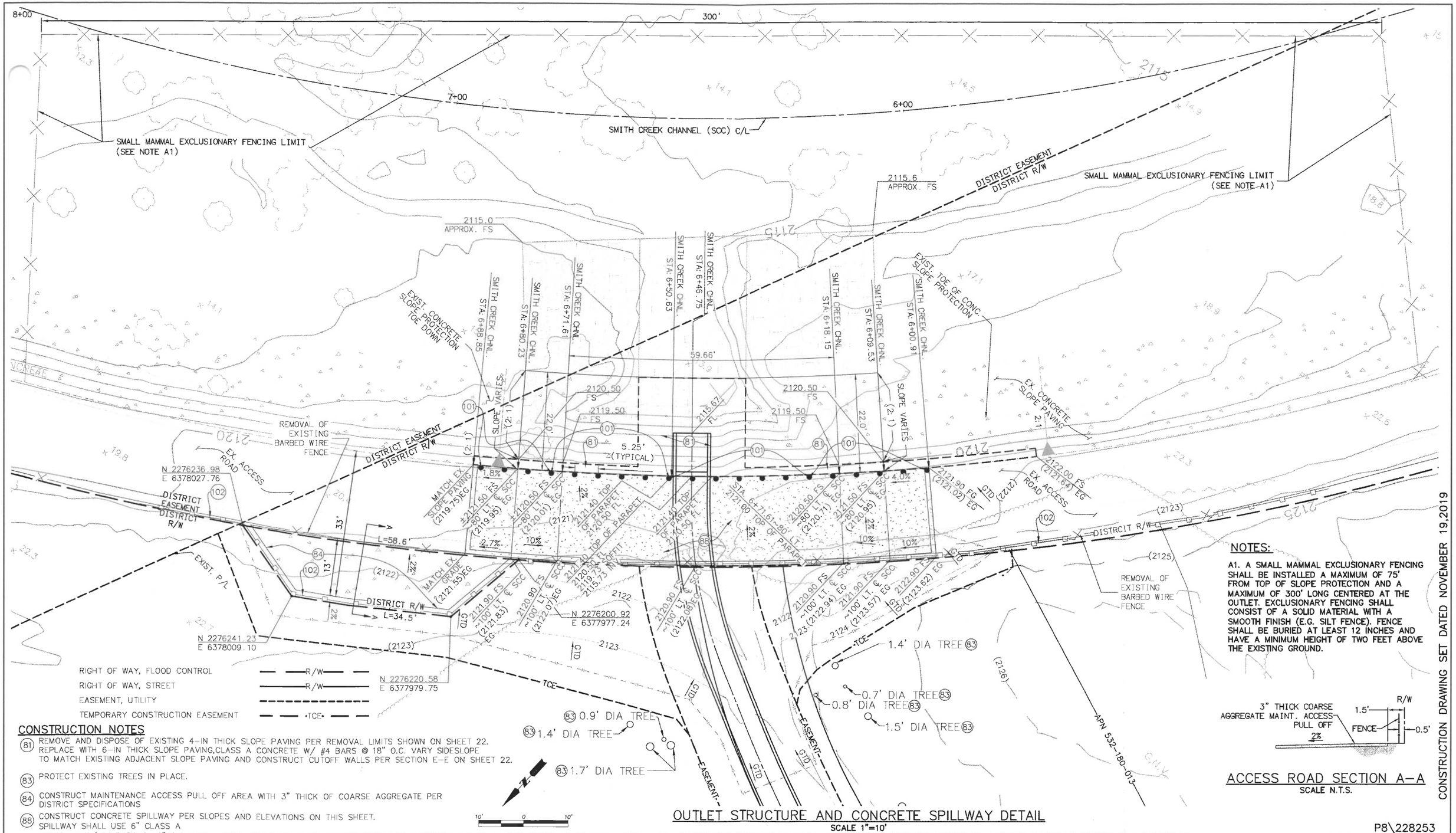
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LATERAL PROFILES

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 16 OF 27



CONSTRUCTION NOTES

(81) REMOVE AND DISPOSE OF EXISTING 4-IN THICK SLOPE PAVING PER REMOVAL LIMITS SHOWN ON SHEET 22. REPLACE WITH 6-IN THICK SLOPE PAVING,CLASS A CONCRETE W/ #4 BARS @ 18" O.C. VARY SIDESLOPE TO MATCH EXISTING ADJACENT SLOPE PAVING AND CONSTRUCT CUTOFF WALLS PER SECTION E-E ON SHEET 22.

(83) PROTECT EXISTING TREES IN PLACE.

(84) CONSTRUCT MAINTENANCE ACCESS PULL OFF AREA WITH 3" THICK OF COARSE AGGREGATE PER DISTRICT SPECIFICATIONS

(88) CONSTRUCT CONCRETE SPILLWAY PER SLOPES AND ELEVATIONS ON THIS SHEET. SPILLWAY SHALL USE 6" CLASS A CONCRETE W/ #4 BARS @ 18" O.C. AND CONSTRUCT CONCRETE CUTOFF WALLS AS SHOWN IN DETAILS A-A AND D-D ON SHEET 22.

(101) CONSTRUCT OBJECT MARKERS PER CALTRANS STD. PLAN A73A, TYPE Q (CA).

(102) CONSTRUCT 4'-8" CABLE RAILING PER CALTRANS STD. B11-47.

NOTES:

A1. A SMALL MAMMAL EXCLUSIONARY FENCING SHALL BE INSTALLED A MAXIMUM OF 75' FROM TOP OF SLOPE PROTECTION AND A MAXIMUM OF 300' LONG CENTERED AT THE OUTLET. EXCLUSIONARY FENCING SHALL CONSIST OF A SOLID MATERIAL WITH A SMOOTH FINISH (E.G. SILT FENCE). FENCE SHALL BE BURIED AT LEAST 12 INCHES AND HAVE A MINIMUM HEIGHT OF TWO FEET ABOVE THE EXISTING GROUND.

ACCESS ROAD SECTION A-A
SCALE N.T.S.

OUTLET STRUCTURE AND CONCRETE SPILLWAY DETAIL
SCALE 1"=10'

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
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FLUSH
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ELEV=2150.48 FT.
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DATE: 11/21/19
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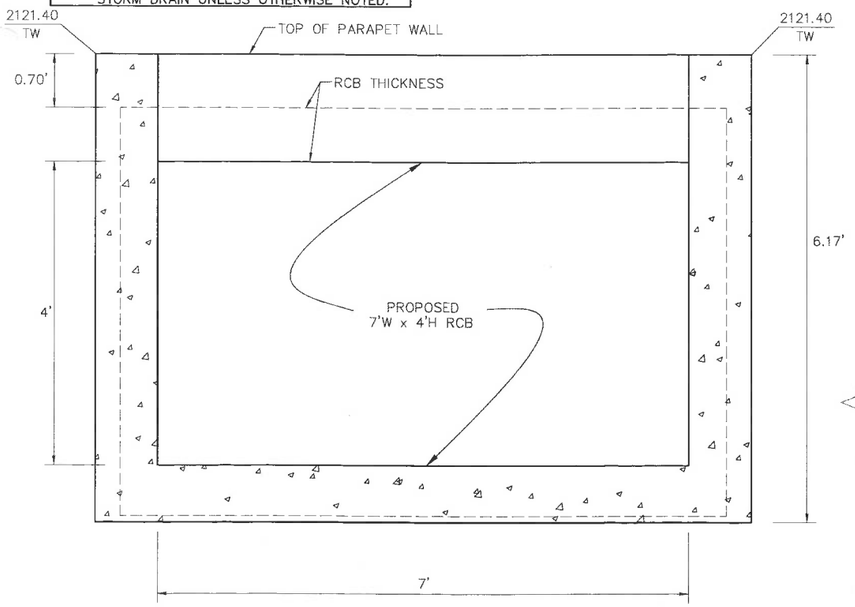
BANNING MDP LINE H STAGE 1

DETAIL SHEET

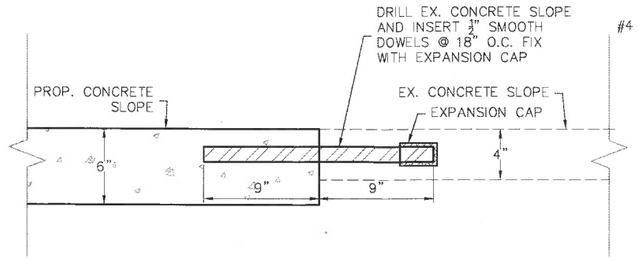
PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 17 OF 27

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



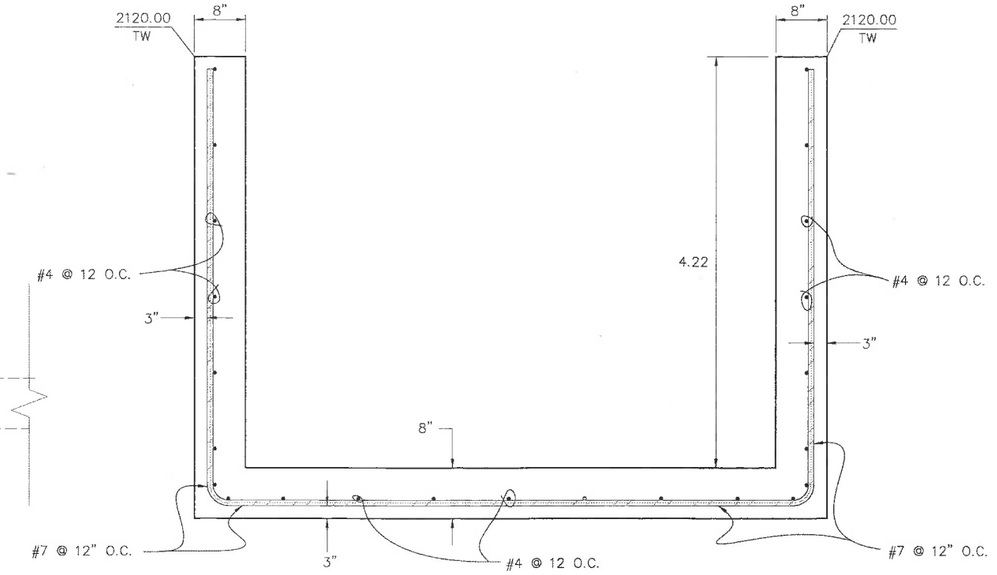
SECTION "A"–"A" LINE "H" RCB & WINGWALL AT STA. 9+89.21

SCALE 1"=1'



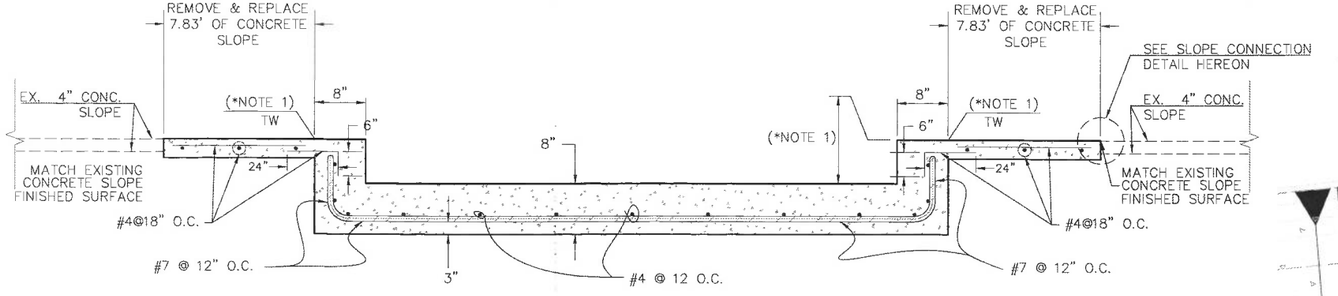
SLOPE CONNECTION DETAIL

N.T.S.



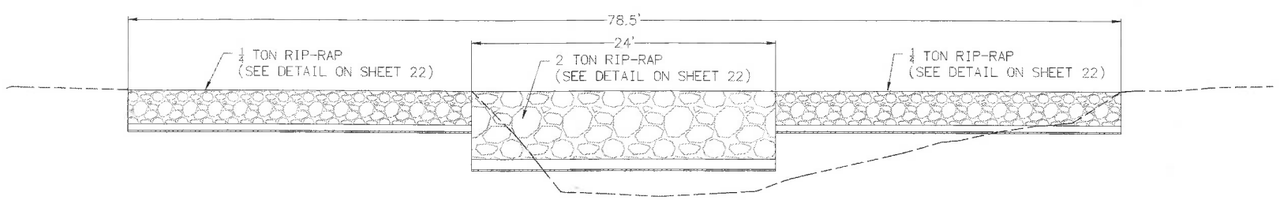
SECTION "B"–"B" – WINGWALL DETAIL AT STA. 9+88.23

N.T.S.



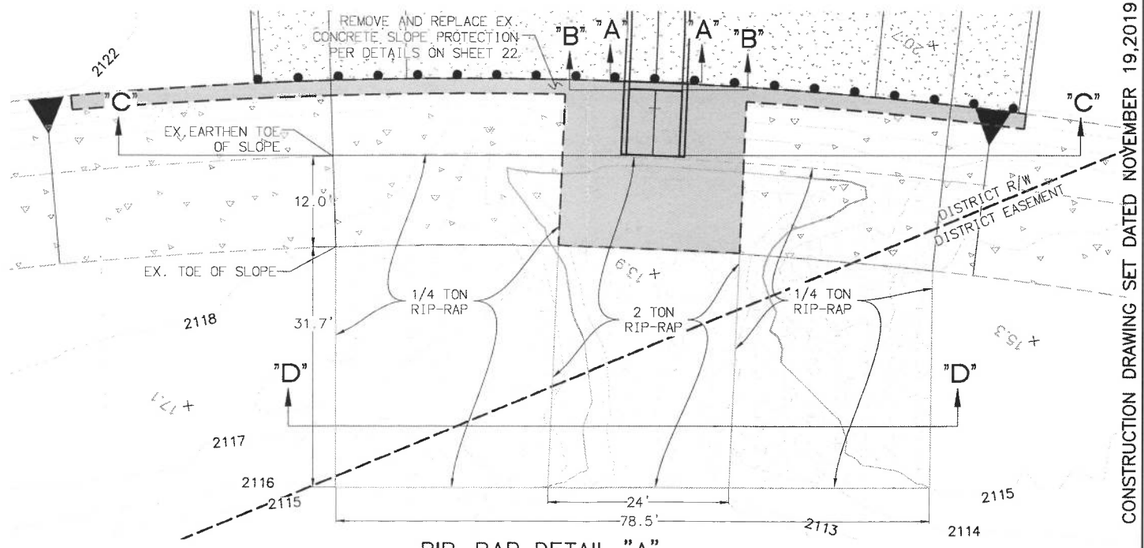
SECTION "C"–"C" – WINGWALL DETAIL AT STA. 9+79.57

N.T.S.



RIP–RAP SECTION "D"–"D"

N.T.S.



RIP–RAP DETAIL "A"

1"=10"

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

*NOTE 1

WINGWALL STRUCTURE HEIGHT SHALL BE CONTROLLED BY THE EXISTING CONCRETE SLOPE. CONSTRUCT WINGWALL STRUCTURE TOP TO BE FLUSH WITH EXISTING CONCRETE SLOPE.

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
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INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
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REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

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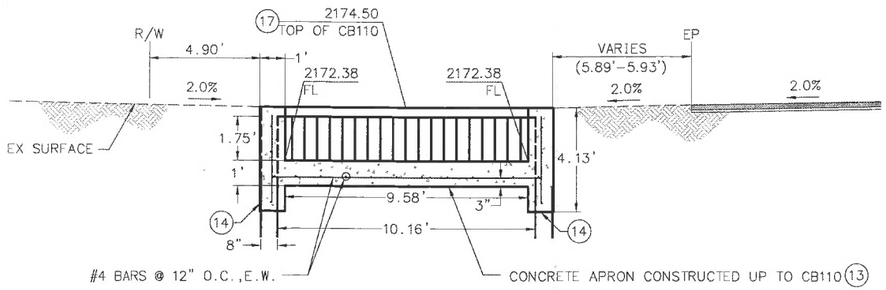
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

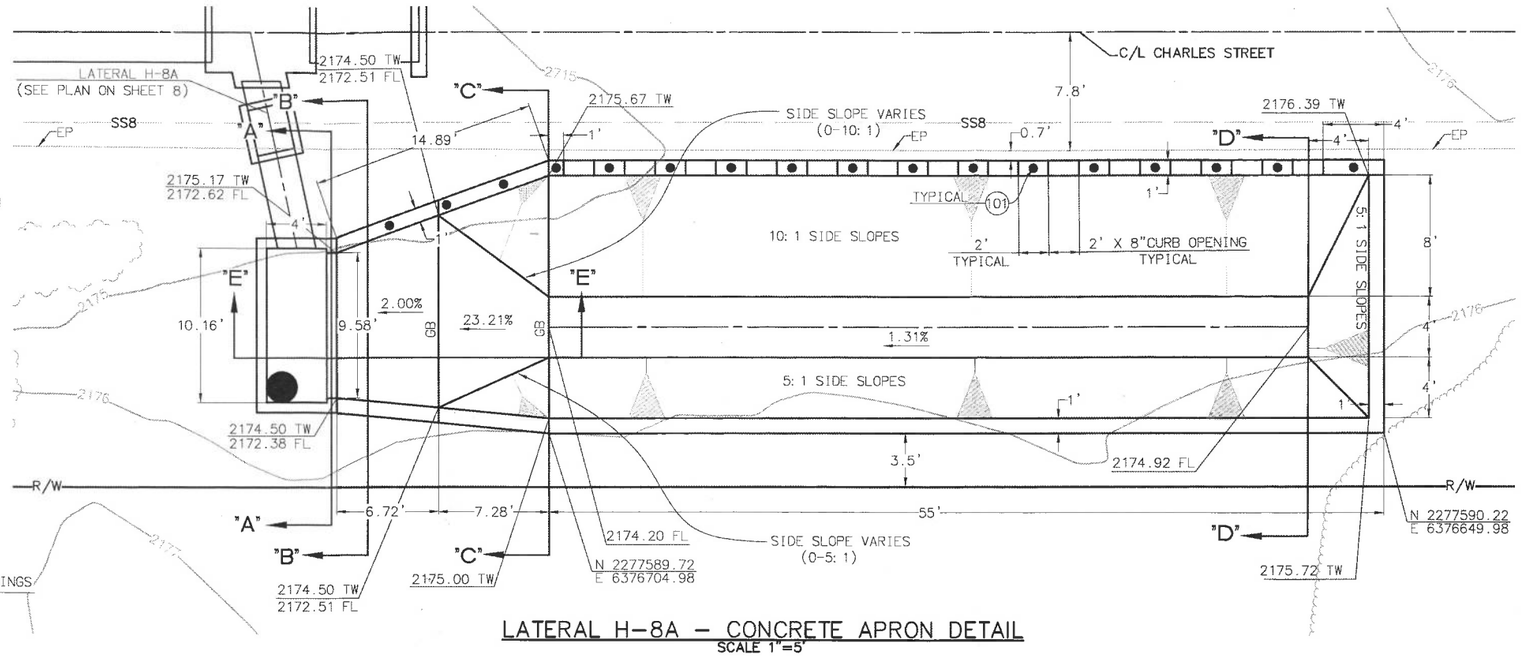
BANNING MDP LINE H
STAGE 1
DETAIL SHEET

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 18 OF 27

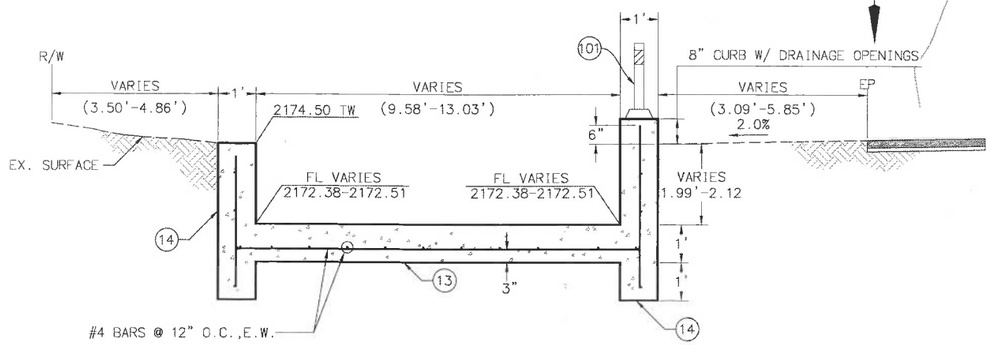
NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



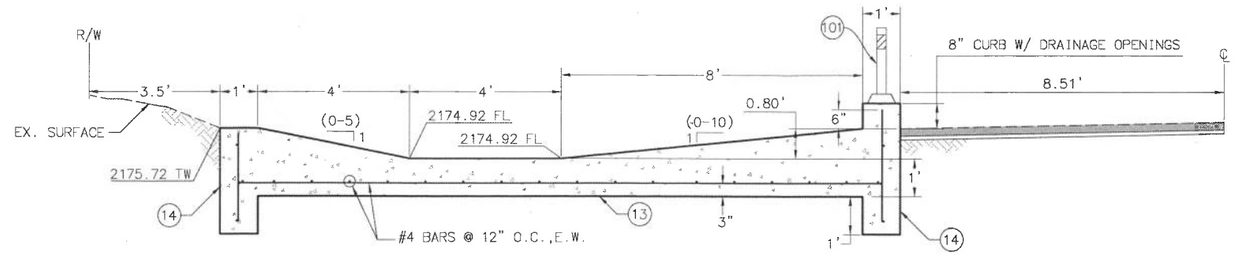
SECTION "A"–"A"
SCALE 1"=3'



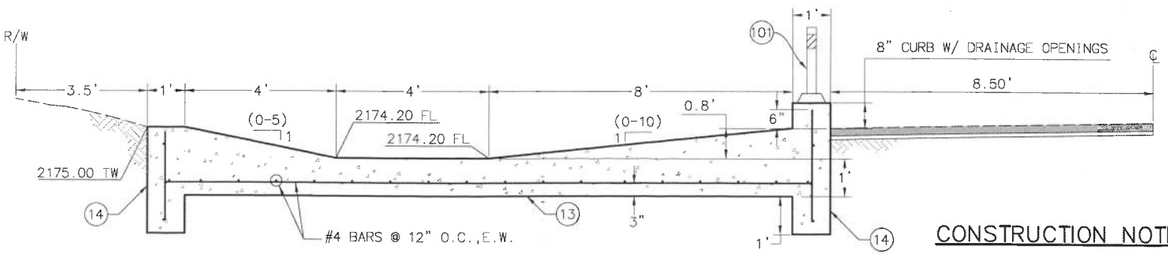
LATERAL H–8A – CONCRETE APRON DETAIL
SCALE 1"=5'



SECTION "B"–"B"
SCALE 1"=2'



SECTION "D"–"D"
SCALE 1"=2'



SECTION "C"–"C"
SCALE 1"=2'

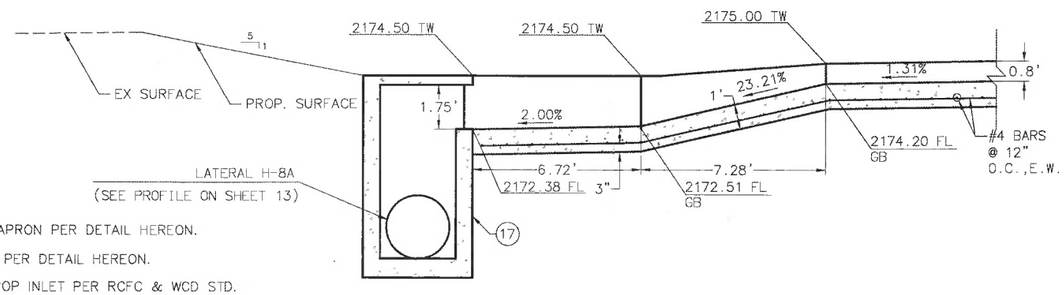
CONSTRUCTION NOTES

(13) CONSTRUCT CLASS "B" CONCRETE APRON PER DETAIL HEREON.

(14) CONSTRUCT 1' THICK CUTOFF WALL PER DETAIL HEREON.

(17) CONSTRUCT MODIFIED CONCRETE DROP INLET PER RCFC & WCD STD. NO. CB110. W=10.16'; V=8.00'; A=4.00'. 12'–30" RCP CLASS IV, SEE PROFILE LATERAL H–8A ON SHEET 13, AND DETAIL HEREON.

(101) CONSTRUCT OBJECT MARKERS PER CALTRANS STD. PLAN A73A, TYPE Q (CA).



SECTION "E"–"E"
SCALE 1"=3'

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
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1" IP
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INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
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REVISIONS			
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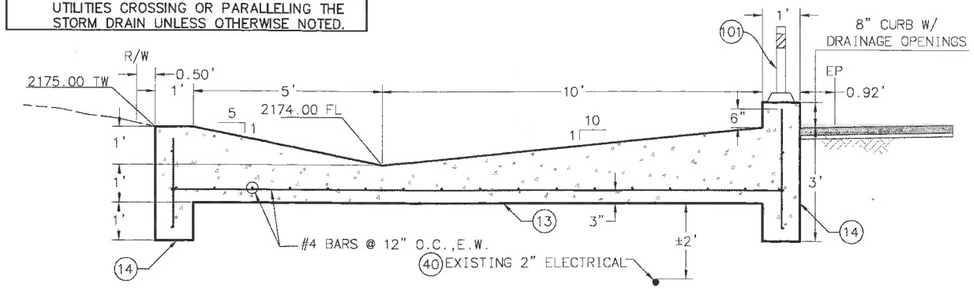
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE:
APPROVED BY: DATE:

BANNING MDP LINE H
STAGE 1
PROPOSED SWALE DETAILS

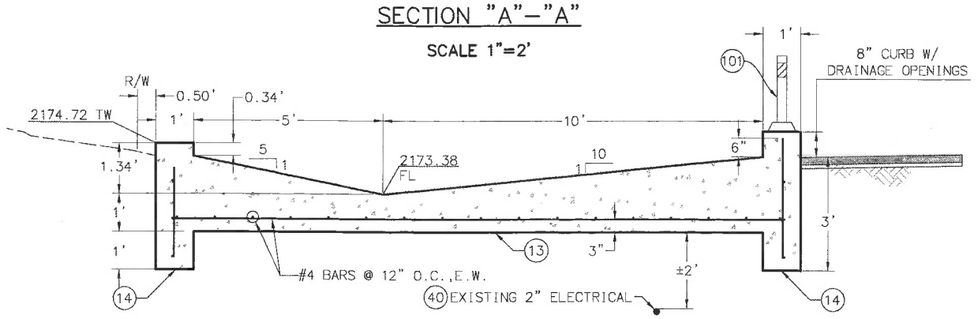
PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 19 OF 27

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



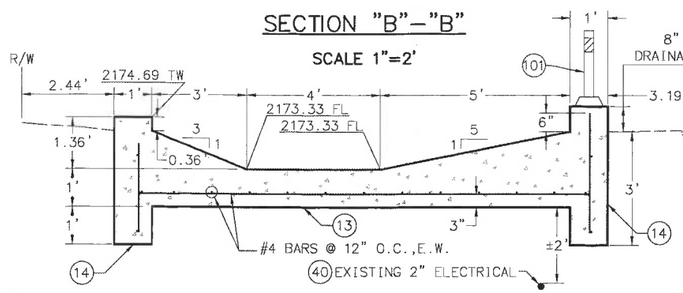
SECTION "A"–"A"

SCALE 1"=2'



SECTION "B"–"B"

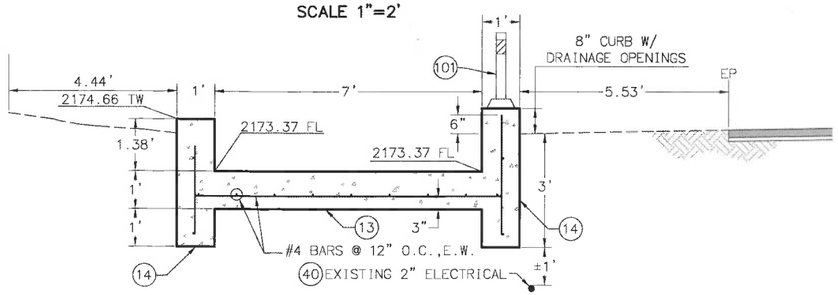
SCALE 1"=2'



R/W

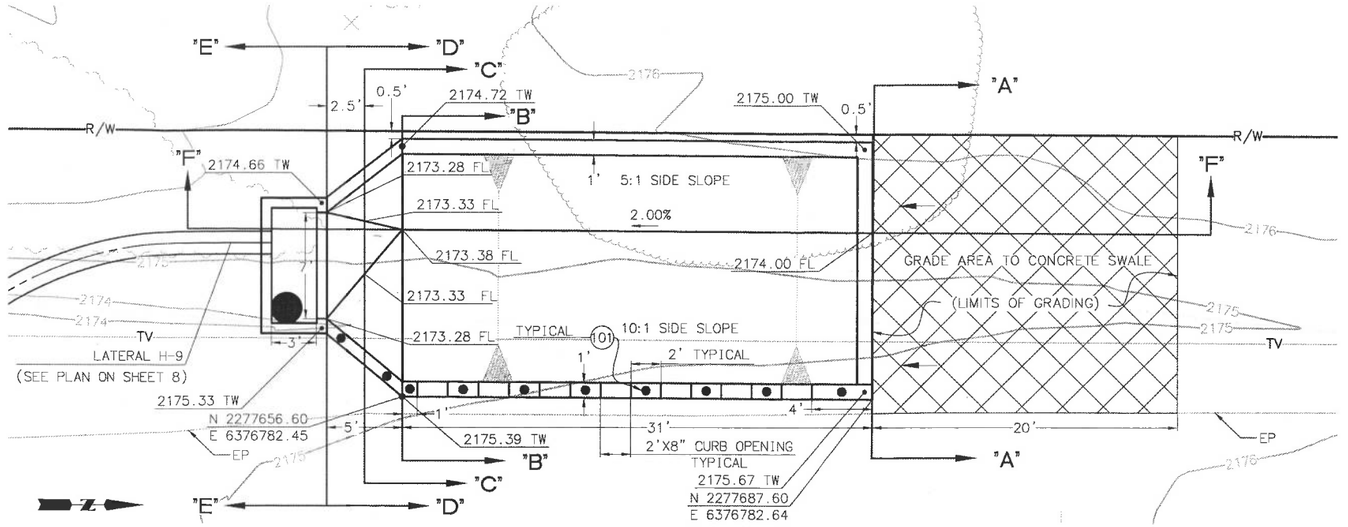
SECTION "C"–"C"

SCALE 1"=2'



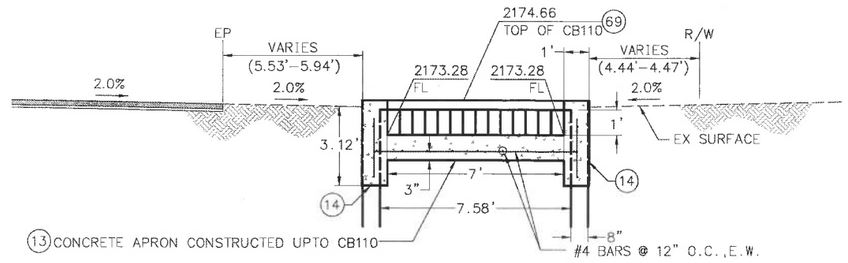
SECTION "D"–"D"

SCALE 1"=2'



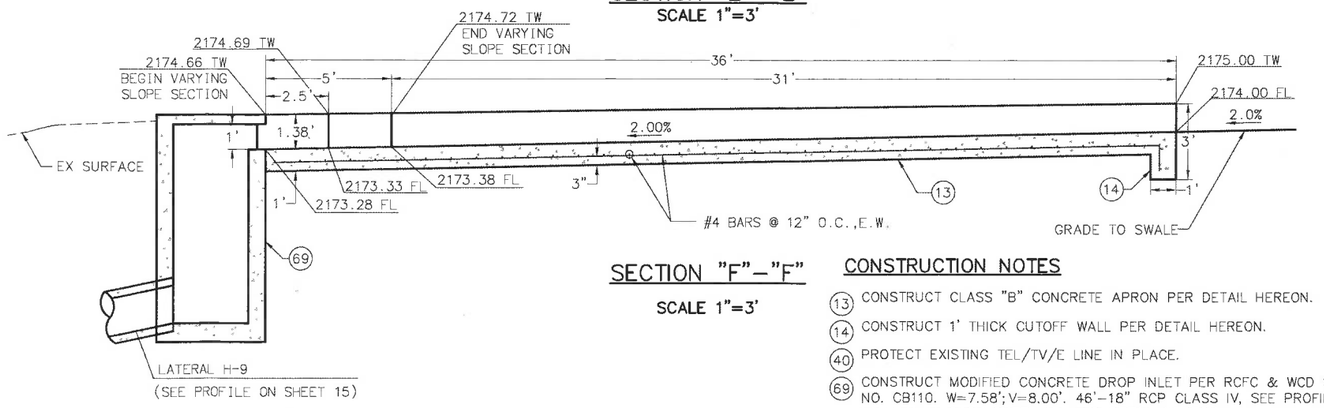
LATERAL H–9 – CONCRETE APRON DETAIL

SCALE 1"=5'



SECTION "E"–"E"

SCALE 1"=3'



SECTION "F"–"F"

SCALE 1"=3'

CONSTRUCTION NOTES

(13) CONSTRUCT CLASS "B" CONCRETE APRON PER DETAIL HEREON.

(14) CONSTRUCT 1' THICK CUTOFF WALL PER DETAIL HEREON.

(40) PROTECT EXISTING TEL/TV/E LINE IN PLACE.

(69) CONSTRUCT MODIFIED CONCRETE DROP INLET PER RCFC & WCD STD. NO. CB110. W=7.58'; V=8.00'. 46'–18" RCP CLASS IV, SEE PROFILE LATERAL H–9 ON SHEET 15, AND DETAIL HEREON.

(101) CONSTRUCT OBJECT MARKERS PER CALTRANS STD. PLAN A73A, TYPE Q (CA).

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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SEAL–ENGINEER

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BENCHMARK:
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INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
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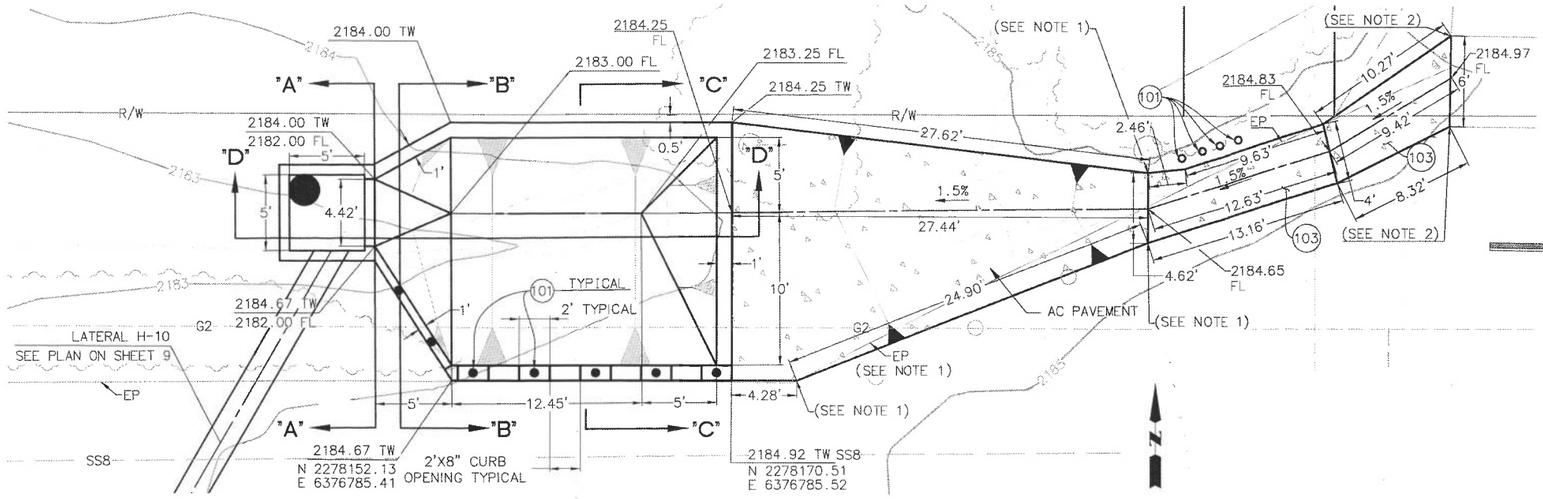
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE:
APPROVED BY: DATE:

BANNING MDP LINE H
STAGE 1
PROPOSED SWALE DETAILS

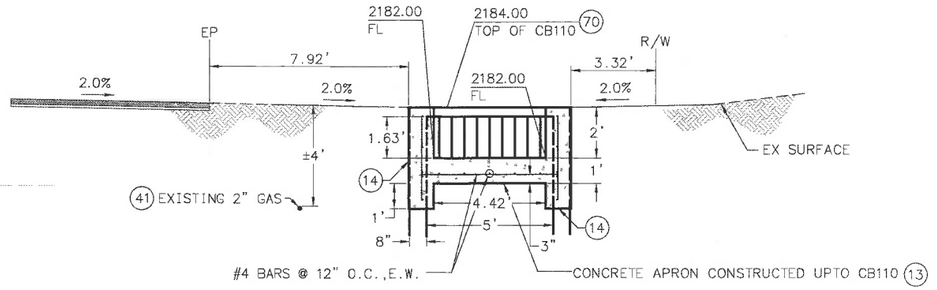
PROJECT NO. 5–0–0177–01
DRAWING NO. 5–0224
SHEET NO. 20 OF 27

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



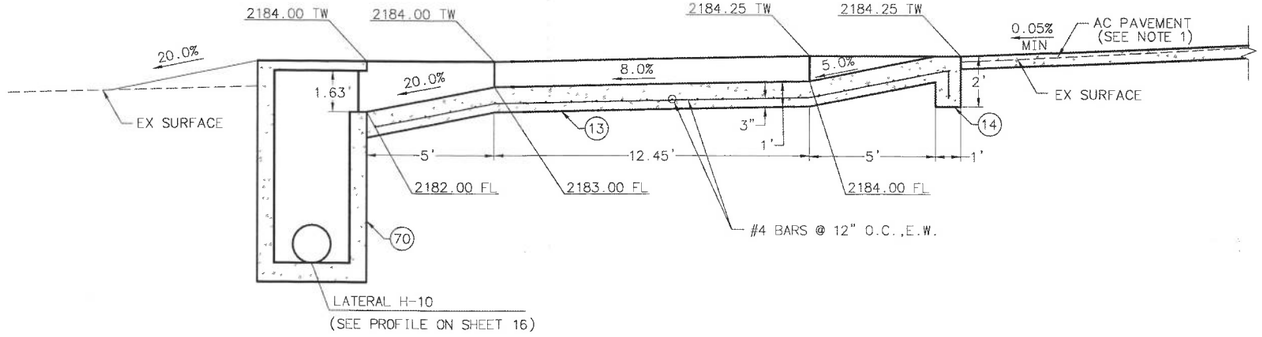
LATERAL H-10 – CONCRETE APRON DETAIL

SCALE 1"=5'



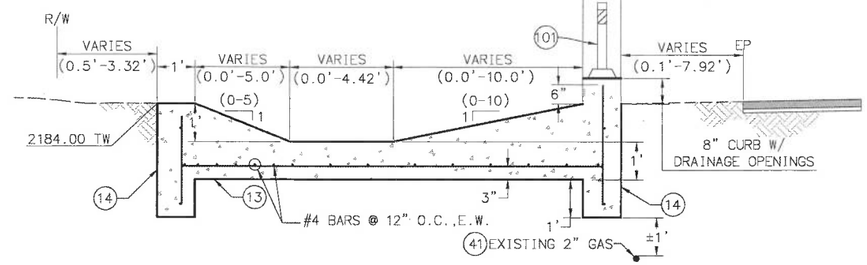
SECTION "A"–"A"

SCALE 1"=3'



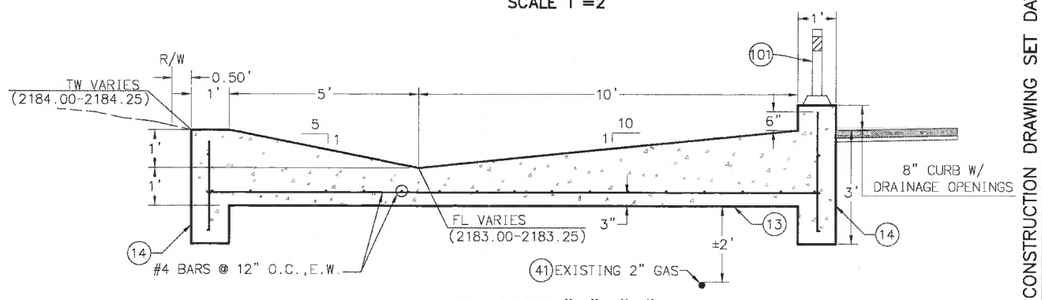
SECTION "D"–"D"

SCALE 1"=3'



SECTION "B"–"B"

SCALE 1"=2'



SECTION "C"–"C"

SCALE 1"=2'

NOTES TO CONTRACTOR

NOTE 1: CONTRACTOR TO FIELD VERIFY EDGE OF PAVEMENT AND CONSTRUCT CONCRETE APRON LEVEL WITH EXISTING EDGE OF PAVEMENT.

NOTE 2: CONTRACTOR TO FIELD VERIFY EXISTING CROSS GUTTER AND SHALL CONSTRUCT RIBBON GUTTER TO BE LEVEL WITH EXISTING CROSS GUTTER.

CONSTRUCTION NOTES

(13) CONSTRUCT CLASS "B" CONCRETE APRON PER DETAIL HEREON.

(14) CONSTRUCT 1' THICK CUTOFF WALL PER DETAIL HEREON.

(41) PROTECT EXISTING GAS LINE IN PLACE.

(70) CONSTRUCT CONCRETE DROP INLET PER RCF & WCD STD. NO. CB110, W=5',H=1.63', V=8.00',A=5.00'. 26'-24" RCP CLASS VI. SEE PROFILE H-10 ON SHEET 16, AND DETAIL HEREON.

(101) CONSTRUCT OBJECT MARKERS PER CALTRANS STD. PLAN A73A, TYPE Q (CA).

(103) CONSTRUCT CONCRETE RIBBON GUTTER PER CITY OF BANNING STD. NO. C-211.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.

TWO WORKING DAYS BEFORE YOU DIG

SCAL-ENGINEER

REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE:
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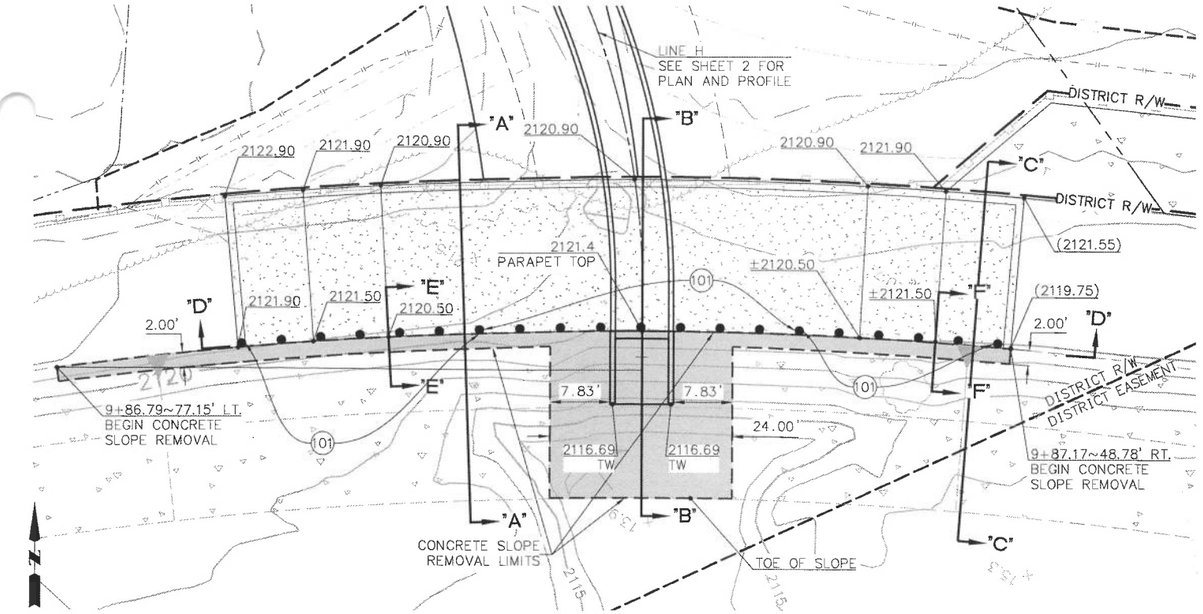
BANNING MDP LINE H
STAGE 1
PROPOSED SWALE DETAILS

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 21 OF 27

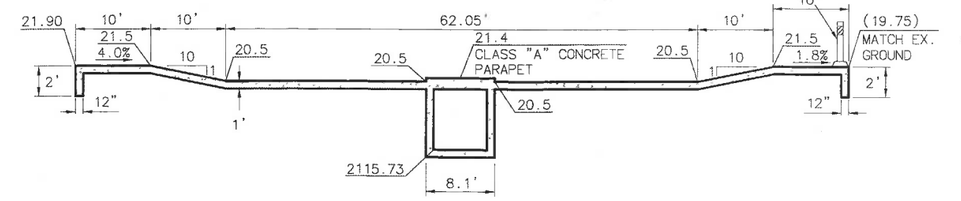


OUTLET STRUCTURE AND CONCRETE SPILLWAY DETAIL

SCALE 1"=10'
(SEE NOTE A1)

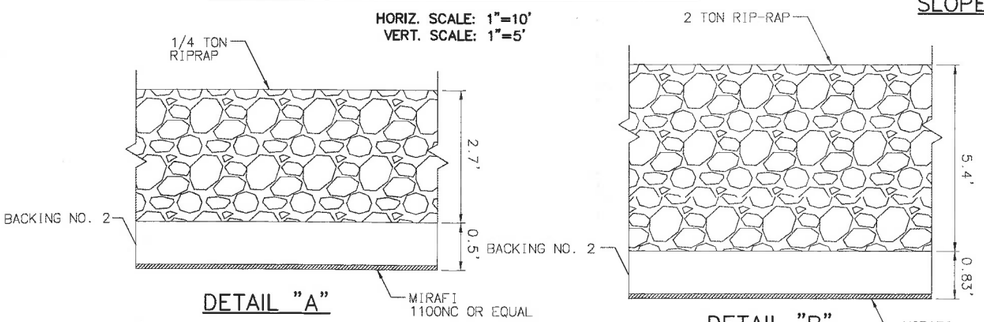
LEGEND:

LIMITS OF EX. CONCRETE SLOPE REMOVAL



CONCRETE SPILLWAY – SECTION "D"–"D"

HORIZ. SCALE: 1"=10'
VERT. SCALE: 1"=5'



DETAIL "A"
1/4 TON RIP–RAP DETAIL

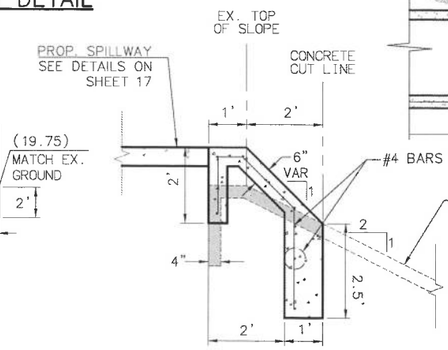
N.T.S.

DETAIL "B"
2 TON RIP–RAP DETAIL

N.T.S.

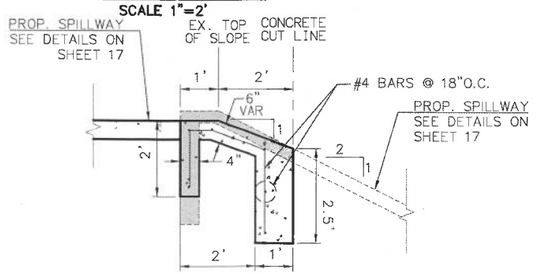
NOTES:

A1. A SMALL MAMMAL EXCLUSIONARY FENCING SHALL BE INSTALLED A MAXIMUM OF 75' FROM TOP OF SLOPE PROTECTION AND A MAXIMUM OF 300' LONG CENTERED AT THE OUTLET. EXCLUSIONARY FENCING SHALL CONSIST OF A SOLID MATERIAL WITH A SMOOTH FINISH (E.G. SILT FENCE). FENCE SHALL BE BURIED AT LEAST 12 INCHES AND HAVE A MINIMUM HEIGHT OF TWO FEET ABOVE THE EXISTING GROUND.



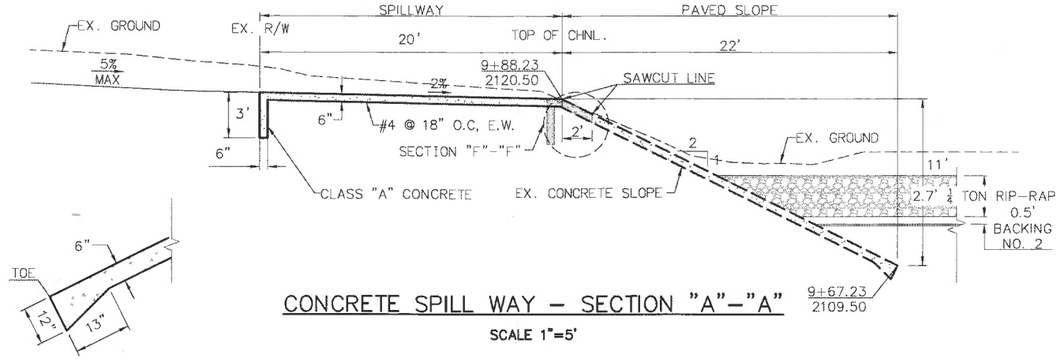
SLOPE PAVING AND CUTOFF WALL DETAIL
SECTION "F"–"F"

SCALE 1"=2'



SLOPE PAVING AND CUTOFF WALL DETAIL
SECTION "E"–"E"

SCALE 1"=2'



CONCRETE SPILL WAY – SECTION "A"–"A"

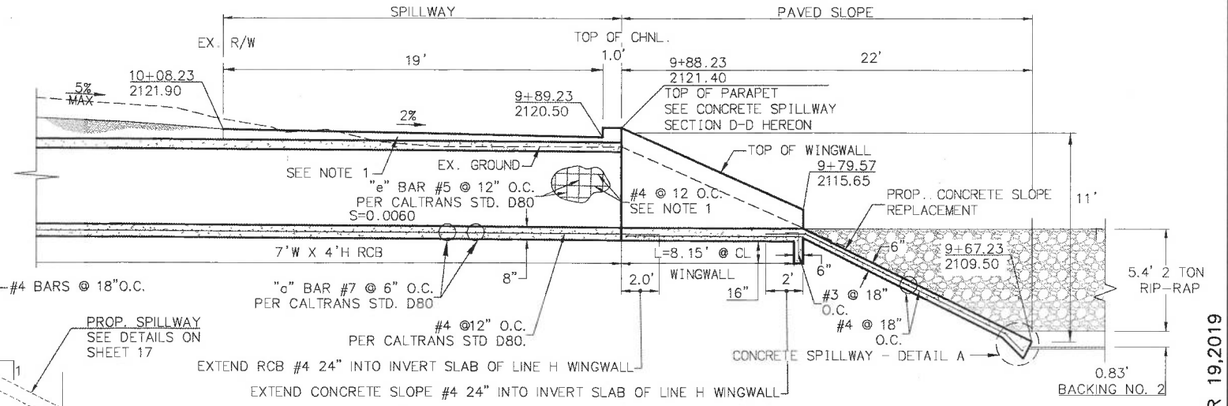
SCALE 1"=5'

SLOPE PAVING FOOTING – DETAIL "A"

SCALE 1"=2'

CONSTRUCTION NOTES

(101) CONSTRUCT OBJECT MARKERS PER CALTRANS STD. PLAN A73A.

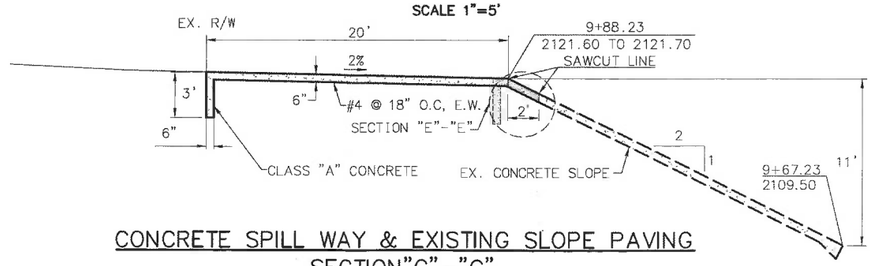


NOTE:

1. STA. 9+79.57 TO STA. 9+99.57 THICKNESS OF ROOF IS GREATER THAN STANDARD THICKNESS. STRUCTURE SHALL BE POURED MONOLITHICALLY TO CONFORM TO SPILLWAY DESIGN ELEVATIONS. STA. 9+79.57 TO STA. 9+99.57 TOP DECK OF RCB WILL BE EXPOSED, ADDITIONAL TOP REINFORCEMENT REQUIRED PER NOTE 9, CALTRANS STD. PLAN D80.
2. ALL CONCRETE SLOPE PAVING SHALL BE MONOLITHICALLY PLACED

CONCRETE SPILL WAY & SLOPE PAVING – SECTION "B"–"B"

SCALE 1"=5'



CONCRETE SPILL WAY & EXISTING SLOPE PAVING
SECTION"C"–"C"

SCALE 1"=5'

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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REGISTERED PROFESSIONAL ENGINEER
JOSEPH L. CASTANEDA
No. 59835
EXP. 12/31/19
CIVIL
STATE OF CALIFORNIA

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

JOSEPH L. CASTANEDA R.C.E. 59835 — DATE 11/19/19

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG
FLUSH
INTERSECTION OF
HATHAWAY ST. AND
WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

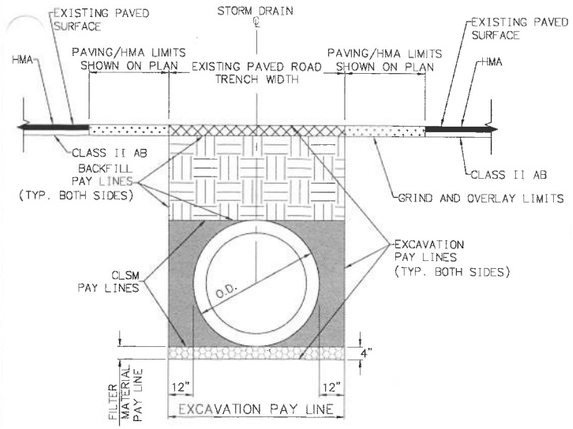
BANNING MDP LINE H STAGE 1

DETAIL SHEET

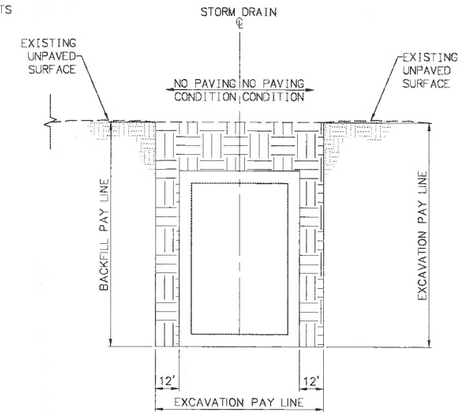
PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 22 OF 27

PAY LINE LEGEND

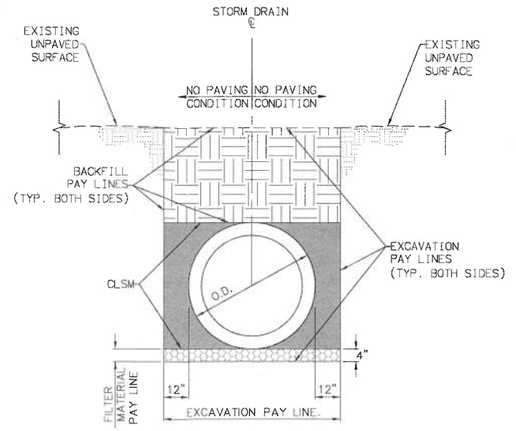
- CONSTRUCT FULL HMA AND AB REPLACEMENT WITHIN TRENCH LIMITS. INSTALL 4" TYPE A HMA OVER 6" CLASS II AB.
- PLACE CLSM BACKFILL TO TOP OF RCB/RCP
- PLACE 4" FILTER MATERIAL
- GRIND AND OVERLAY
- AREA TO REPAVED 4" HMA OVER 6" BASE
- BACKFILL SHALL BE COMPACTED AS FOLLOWS:
  A) UPPER 3' SHALL BE COMPACTED TO 95%
  B) REMAINING BACKFILL SHALL BE COMPACTED TO 90%



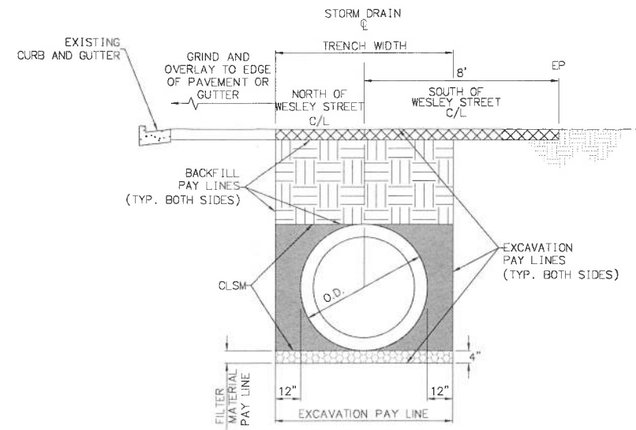
PAVED RCP PAY LINE DETAIL
N.T.S.



UNPAVED RCB PAY LINE DETAIL
N.T.S.



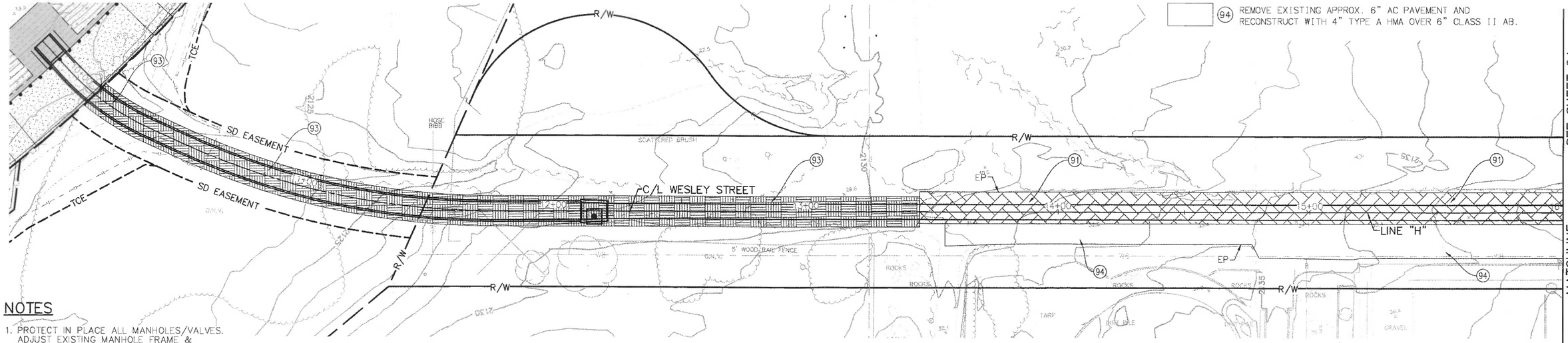
UNPAVED RCP PAY LINE DETAIL
N.T.S.



WESLEY STREET RCP PAY LINE DETAIL
N.T.S.

PLAN HATCH LEGEND

- (91) CONSTRUCT FULL HMA AND AB REPLACEMENT WITHIN TRENCH LIMITS. INSTALL 4" TYPE A HMA OVER 6" CLASS II AB.
- (92) 0.1' THICK GRIND AND OVERLAY LOCATION
- (93) UNPAVED LOCATION
- (94) REMOVE EXISTING APPROX. 6" AC PAVEMENT AND RECONSTRUCT WITH 4" TYPE A HMA OVER 6" CLASS II AB.



CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

NOTES

1. PROTECT IN PLACE ALL MANHOLES/VALVES. ADJUST EXISTING MANHOLE FRAME & COVER PER THE CITY OF BANNING STD. DWG S05 AS REQUIRED. ADJUST EXISTING WATER VALVE COVER PER THE CITY OF BANNING STD. DWG W-20 AS REQUIRED.
2. INSTALL/REPLACE ALL DISTURBED STRIPING, YELLOW CENTERLINE, WHITE EDGE LINES AND REFLECTIVE PAVEMENT. DISTURBED MARKINGS SHALL BE REPLACED WITH 2 COATS PAINT FOR STRIPING, AND THERMOPLASTIC FOR ALL BARS, LEGENDS, AND CROSSWALKS.
3. ALL SIGNING, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH SECTION 84 OF THE CALTRANS STANDARD SPECIFICATIONS (LATEST EDITION) AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL LAWS.

SEAL-ENGINEER

REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

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PH. 951.304.9552 FAX 951.304.3568
Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG
FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

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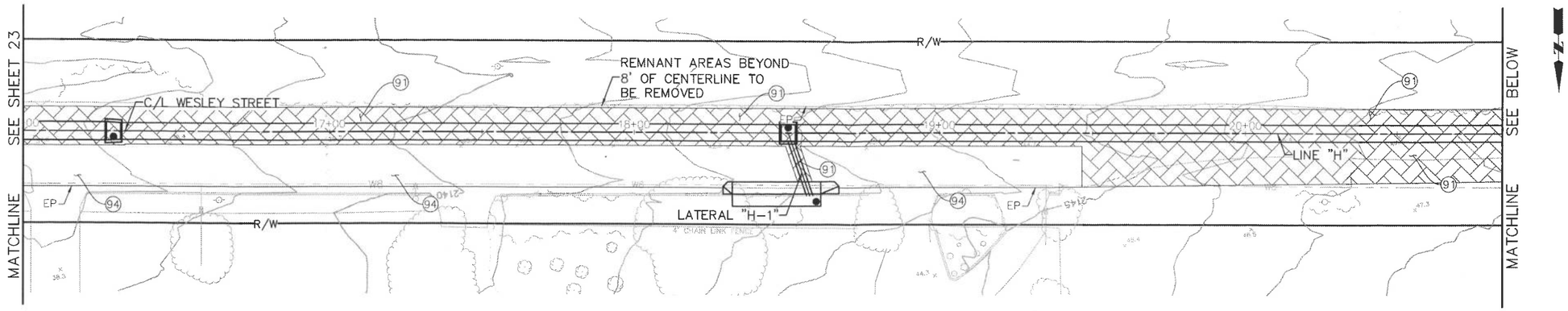
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LINE "H"
9+79.57 - 16+00.00
PAVING PLAN

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 23 OF 27

P8\228253



NOTES

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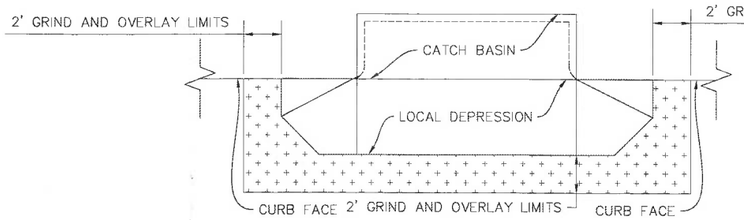


CATCH BASIN GRIND AND OVERLAY DETAIL

N.T.S.

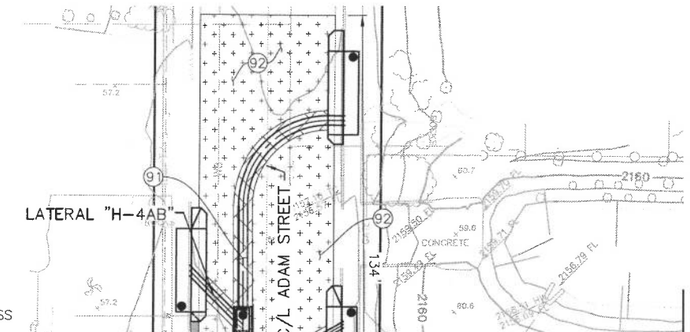
PLAN HATCH LEGEND

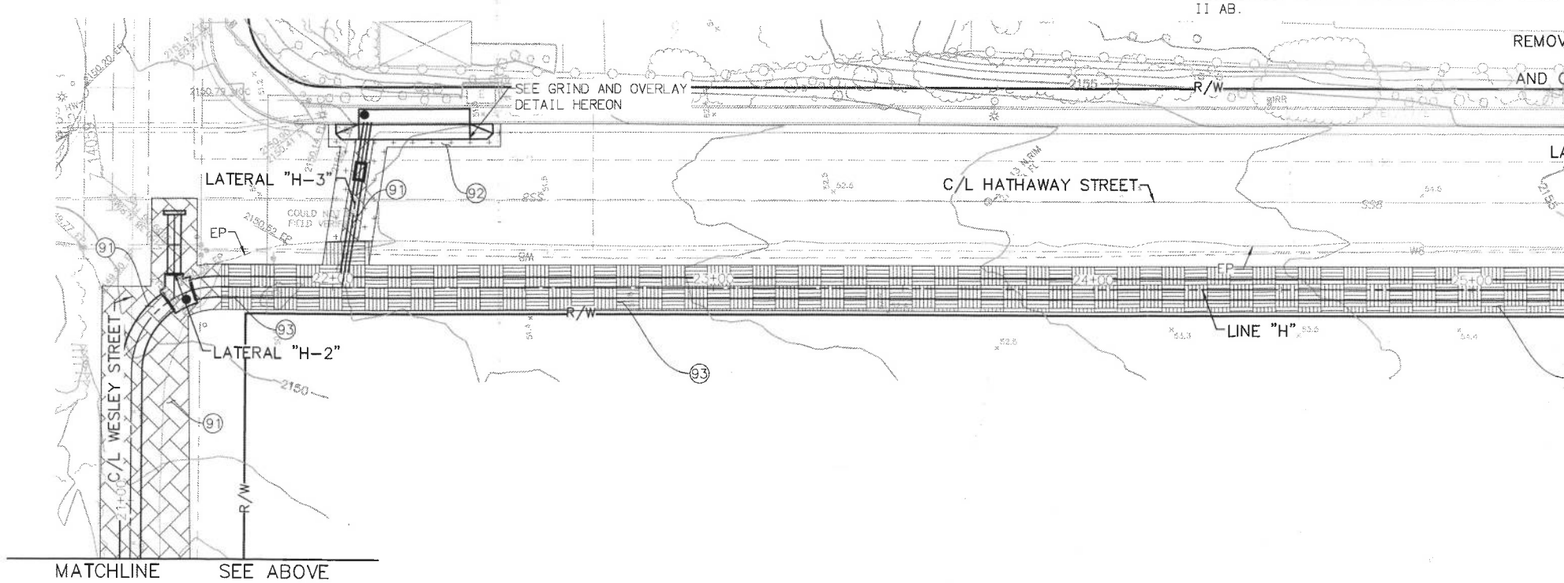
(91) CONSTRUCT FULL HMA AND AB REPLACEMENT WITHIN TRENCH LIMITS. INSTALL 4" TYPE A HMA OVER 6" CLASS II AB. (SEE PAY LINE DETAILS ON SHEET 23)

(92) 0.1' THICK GRIND AND OVERLAY LOCATION (SEE PAY LINE DETAILS ON SHEET 23)

(93) UNPAVED LOCATION (SEE PAY LINE DETAILS ON SHEET 23)

(94) REMOVE EXISTING APPROX. 6" AC PAVEMENT AND RECONSTRUCT WITH 4" TYPE A HMA OVER 6" CLASS II AB.





20' 0 20'

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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SEAL-ENGINEER: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

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INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
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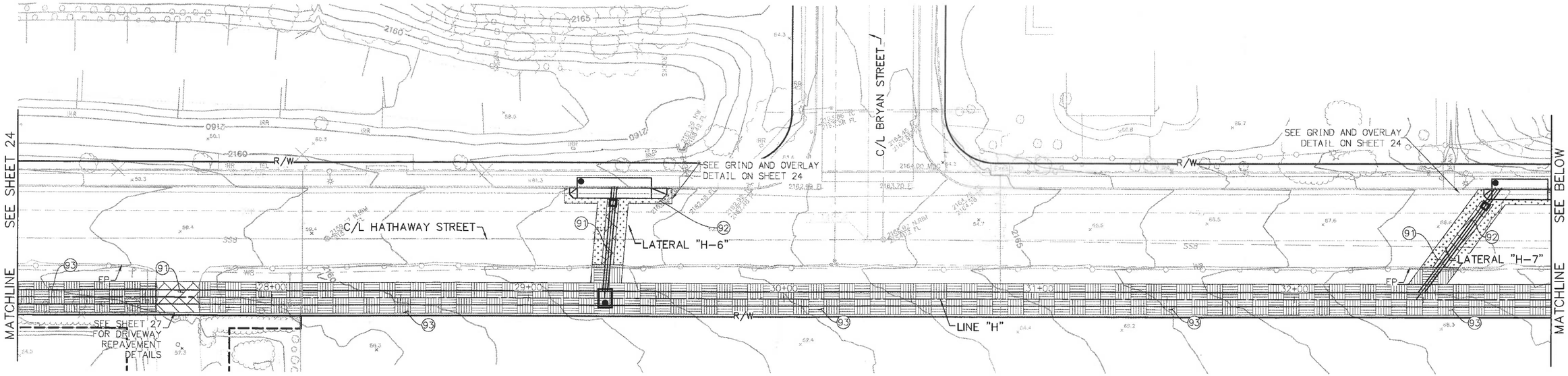
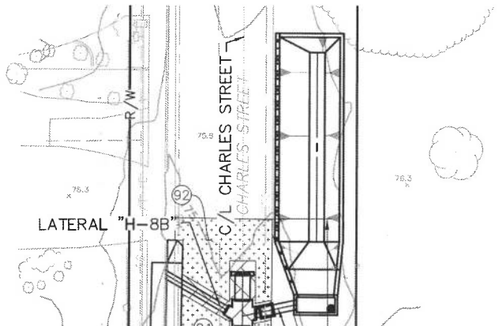
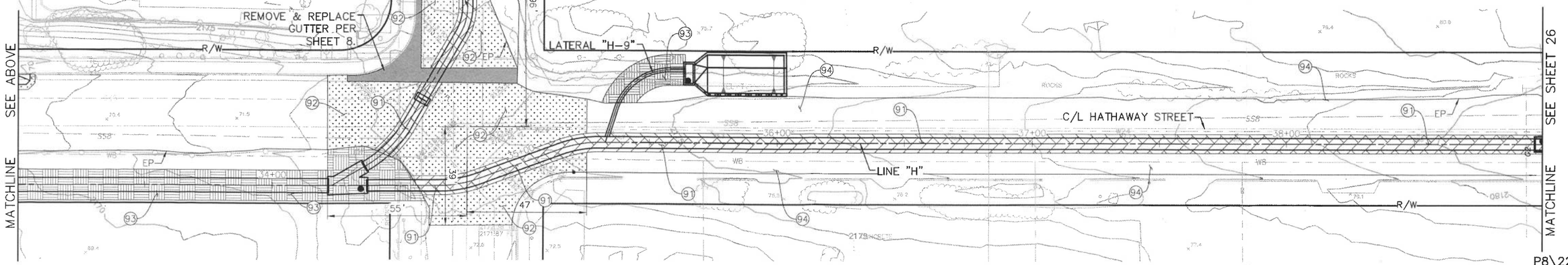
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LINE "H"
16+00.00 - 27+00.00
PAVING PLAN

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 24 OF 27







NOTES

1. PROTECT IN PLACE ALL MANHOLES/VALVES. ADJUST EXISTING MANHOLE FRAME & COVER PER THE CITY OF BANNING STD. DWG S05 AS REQUIRED. ADJUST EXISTING WATER VALVE COVER PER THE CITY OF BANNING STD. DWG W-20 AS REQUIRED.
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PLAN HATCH LEGEND

(91) CONSTRUCT FULL HMA AND AB REPLACEMENT WITHIN TRENCH LIMITS. INSTALL 4" TYPE A HMA OVER 6" CLASS II AB. (SEE PAY LINE DETAILS ON SHEET 23)

(92) 0.1' THICK GRIND AND OVERLAY LOCATION (SEE PAY LINE DETAILS ON SHEET 23)

(93) UNPAVED LOCATION (SEE PAY LINE DETAILS ON SHEET 23)

(94) REMOVE EXISTING APPROX. 6" AC PAVEMENT AND RECONSTRUCT WITH 4" TYPE A HMA OVER 6" CLASS II AB.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

20' 0 20'

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ARTURO VELA
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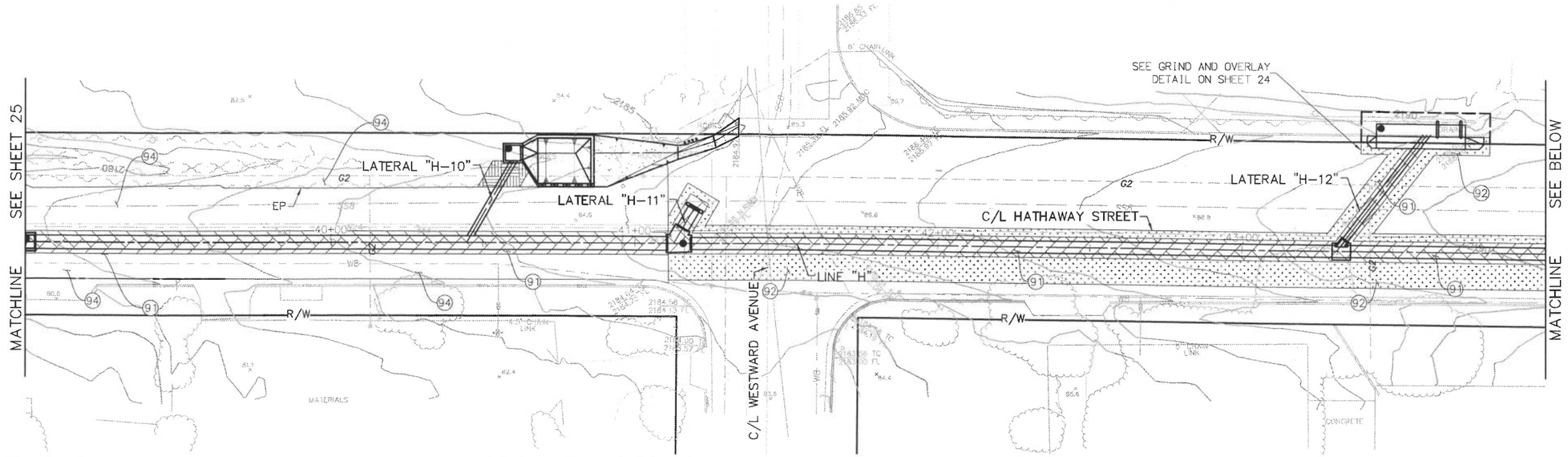
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: _____
DATE: 11/21/19

APPROVED BY: _____
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
LINE "H"
27+00.00 - 39+00.00
PAVING PLAN

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 25 OF 27



NOTES

1. PROTECT IN PLACE ALL MANHOLES/VALVES. ADJUST EXISTING MANHOLE FRAME & COVER PER THE CITY OF BANNING STD. DWG S05 AS REQUIRED. ADJUST EXISTING WATER VALVE COVER PER THE CITY OF BANNING STD. DWG W-20 AS REQUIRED.
2. INSTALL/REPLACE ALL DISTURBED STRIPING, YELLOW CENTERLINE, WHITE EDGE LINES AND REFLECTIVE PAVEMENT. DISTURBED MARKINGS SHALL BE REPLACED WITH 2 COATS PAINT FOR STRIPING, AND THERMOPLASTIC FOR ALL BARS, LEGENDS, AND CROSSWALKS.
3. ALL SIGNING, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH SECTION 84 OF THE CALTRANS STANDARD SPECIFICATIONS (LATEST EDITION) AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL LAWS.

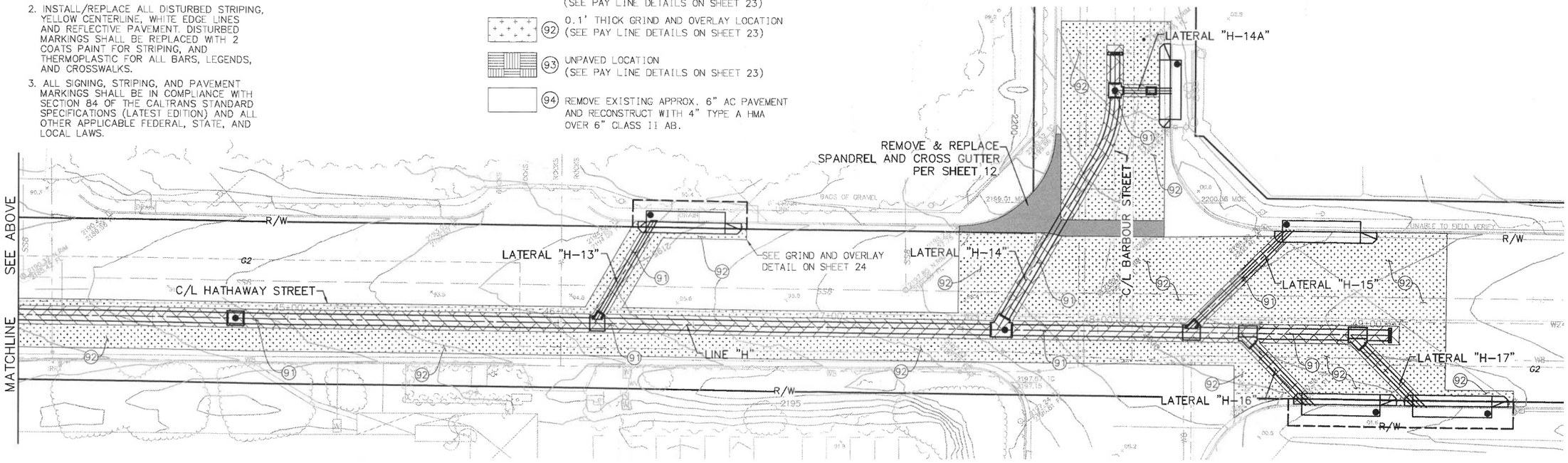
PLAN HATCH LEGEND

(91) CONSTRUCT FULL HMA AND AB REPLACEMENT WITHIN TRENCH LIMITS. INSTALL 4" TYPE A HMA OVER 6" CLASS II AB. (SEE PAY LINE DETAILS ON SHEET 23)

(92) 0.1' THICK GRIND AND OVERLAY LOCATION (SEE PAY LINE DETAILS ON SHEET 23)

(93) UNPAVED LOCATION (SEE PAY LINE DETAILS ON SHEET 23)

(94) REMOVE EXISTING APPROX. 6" AC PAVEMENT AND RECONSTRUCT WITH 4" TYPE A HMA OVER 6" CLASS II AB.



CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

20' 0 20'

Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

SEAL-ENGINEER

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568
Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

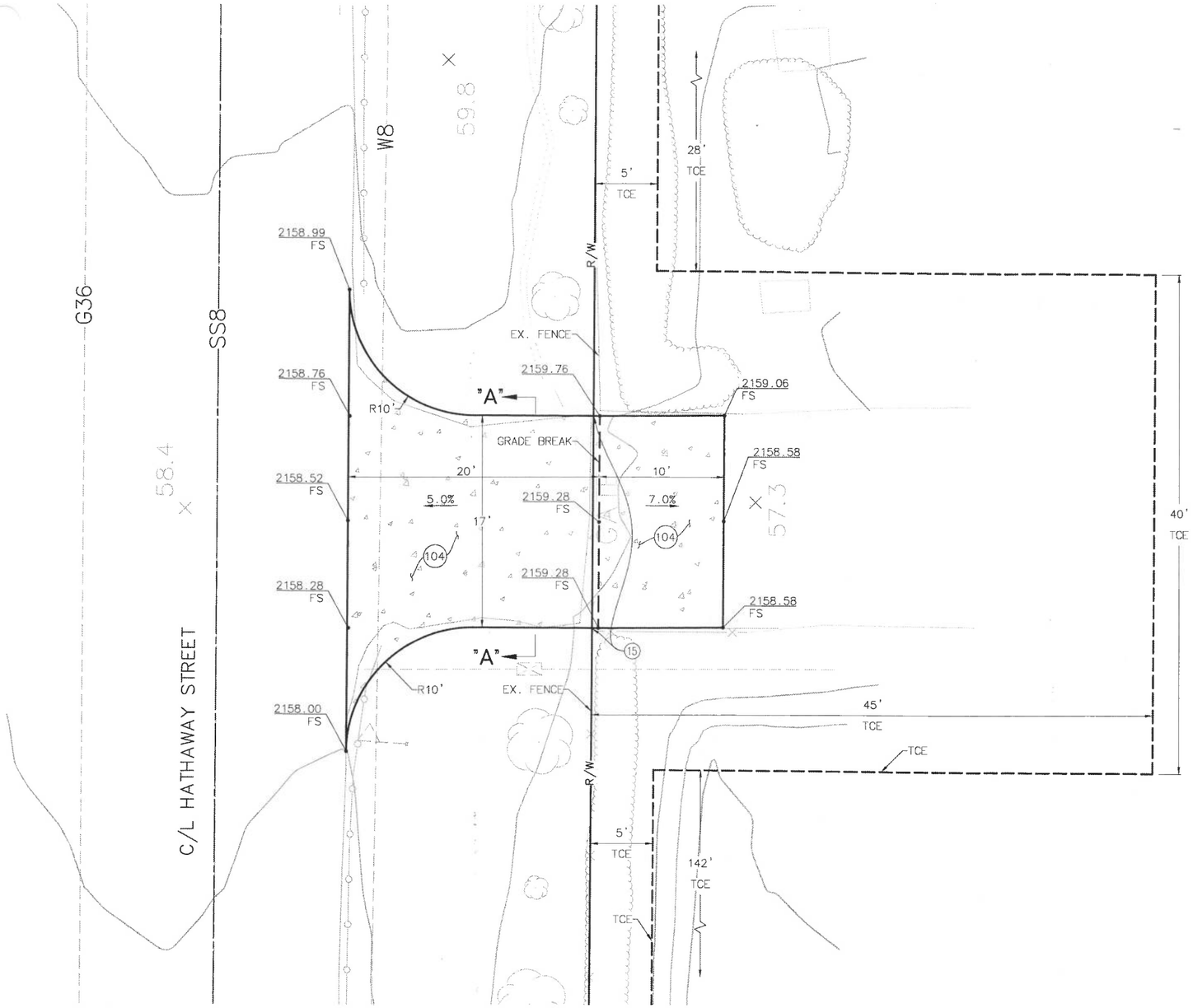
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

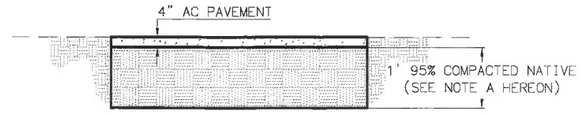
BANNING MDP LINE H
STAGE 1
LINE "H"
39+00.00 - 49+.08.57
PAVING PLAN

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 26 OF 27

NOTE: CONTRACTOR SHALL PROTECT IN PLACE ALL UTILITIES CROSSING OR PARALLELING THE STORM DRAIN UNLESS OTHERWISE NOTED.



DRIVEWAY RECONSTRUCTION DETAIL
SCALE: 1"=5'



SECTION "A"–"A"
SCALE: N.T.S.

CONSTRUCTION NOTES

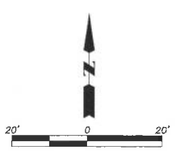
(15) REMOVE AND REINSTALL INTERFERING PORTION OF EXISTING WROUGHT IRON FENCE AND GATE

(104) CONSTRUCT 4" AC OVER 1' 95% COMPACTED NATIVE.

NOTES:

A) BACKFILL SHALL BE COMPACTED AS FOLLOWS:
1. UPPER 12" SHALL BE COMPACTED TO 95%

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019



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SEAL-ENGINEER
REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

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41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH 951.304.9552 FAX 951.304.3568
JOSEPH L. CASTANEDA R.C.E. 59835 — DATE 11/19/19

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG
FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
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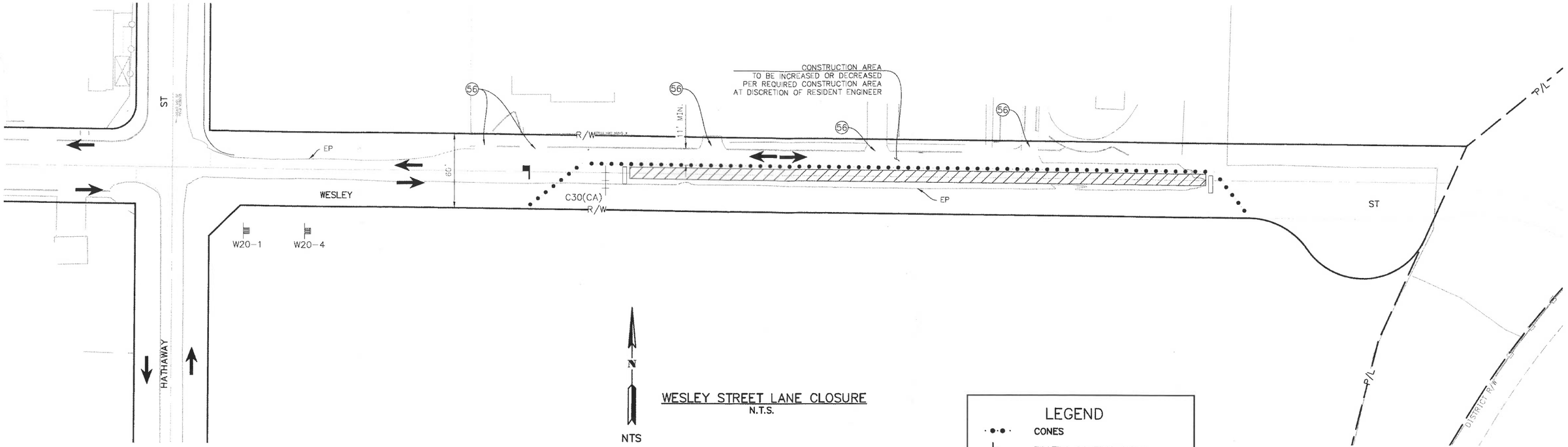
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE
APPROVED BY: DATE

P8\228253

BANNING MDP LINE H STAGE 1
DRIVEWAY RECONSTRUCTION DETAIL

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. 27 OF 27



WESLEY STREET LANE CLOSURE
N.T.S.

LEGEND

	CONES
	TRAFFIC CONTROL SIGNS
	FLAGGER
	TYPE III BARRICADE
	DIRECTION OF TRAVEL
	CONSTRUCTION AREA
	FLASHING ARROW SIGN
	TEMPORARY RAILING (TYPE K) CAL TRANS STD T3A
C13	END CONSTRUCTION
C18	ROAD CONSTRUCTION AHEAD
C30(CA)	LANE CLOSED
M4-8	DETOUR
M4-8a	END DETOUR
M4-9R	DETOUR W/ RIGHT ARROW
M4-9L	DETOUR W/ LEFT ARROW
R3-1	NO RIGHT TURN
R3-2	NO LEFT TURN
R11-2	ROAD CLOSED
R11-4	ROAD CLOSED TO THRU TRAFFIC
SC3(CA)	DETOUR W/ STRAIGHT ARROW
W20-1	ROAD WORK AHEAD
W20-2	DETOUR AHEAD
W20-3	ROAD CLOSED AHEAD
W20-4	ONE LANE ROAD AHEAD

NOTES

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59. POST "NO PARKING" DATE/TIME THROUGH WORK ZONES.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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TWO WORKING DAYS BEFORE YOU DIG

SCAL-ENGINEER
REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568
JOSEPH L. CASTANEDA R.C.E. 59835 DATE 11/19/19

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG
FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
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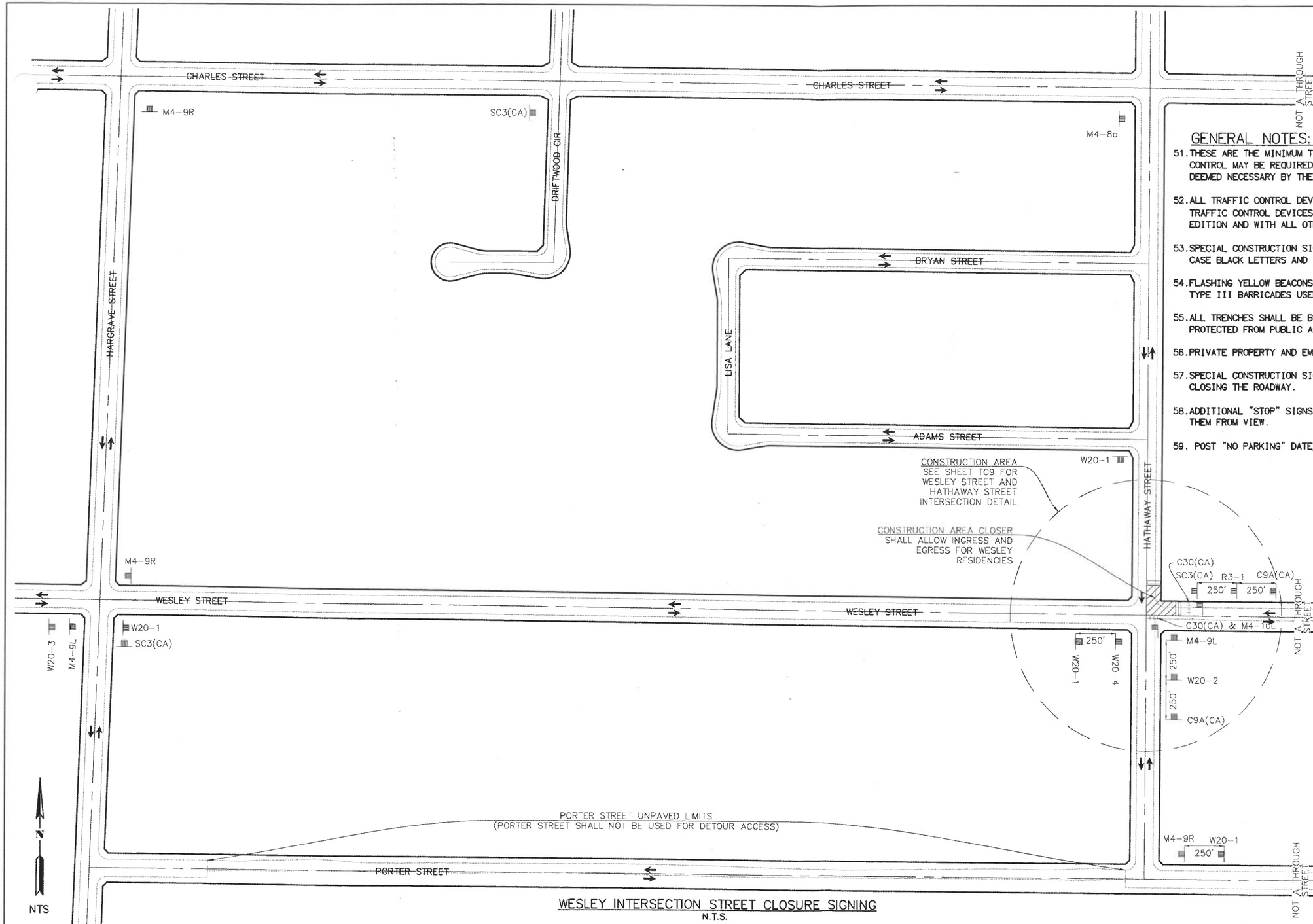
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H STAGE 1

TRAFFIC CONTROL PLAN

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. TC1 OF TC10



WESLEY INTERSECTION STREET CLOSURE SIGNING
N.T.S.

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59. POST "NO PARKING" DATE/TIME THROUGH WORK ZONES.

LEGEND

	CONES
	TRAFFIC CONTROL SIGNS
	FLAGGER
	TYPE III BARRICADE
	DIRECTION OF TRAVEL
	CONSTRUCTION AREA
	FLASHING ARROW SIGN
	TEMPORARY RAILING (TYPE K) CAL TRANS STD T3A
C13	END CONSTRUCTION
C30(CA)	LANE CLOSED
C9A(CA)	FLAGGER
M4-8	DETOUR
M4-8a	END DETOUR
M4-9R	DETOUR W/ RIGHT ARROW
M4-9L	DETOUR W/ LEFT ARROW
M4-10L	DETOUR LEFT
M4-10R	DETOUR RIGHT
R3-1	NO RIGHT TURN
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R11-4	ROAD CLOSED TO THRU TRAFFIC
SC3(CA)	DETOUR W/ STRAIGHT ARROW
W20-1	ROAD WORK AHEAD
W20-2	DETOUR AHEAD
W20-3	ROAD CLOSED AHEAD
W20-4	ONE LANE ROAD AHEAD

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
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1" IP
W/ RCE 13191 TAG
FLUSH
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ELEV=2150.48 FT.
DATUM: NAVD 88

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REF.	DESCRIPTION	APPR.	DATE

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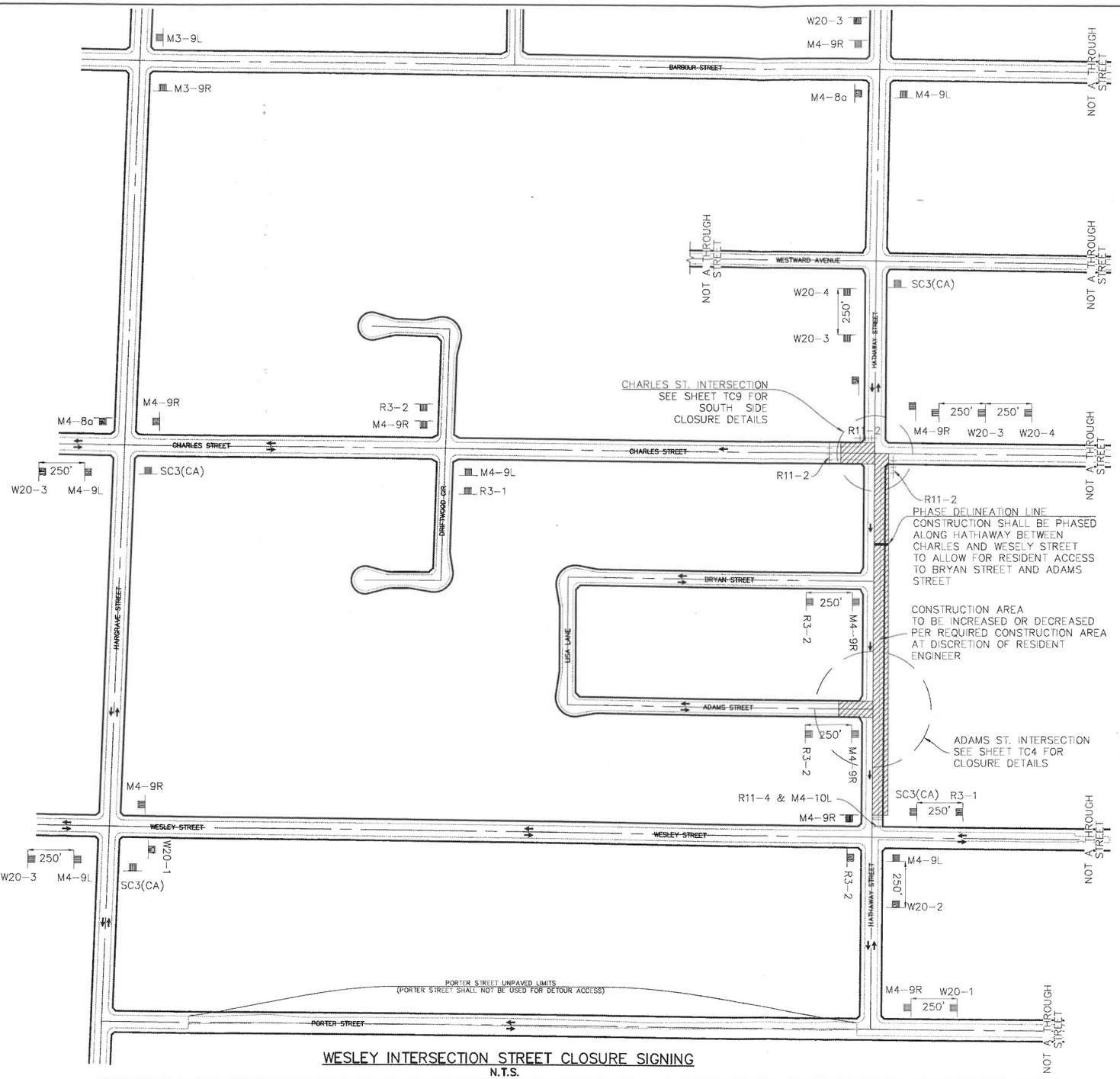
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE: 11/21/19
APPROVED BY: DATE: 11/25/19

BANNING MDP LINE H STAGE 1

TRAFFIC CONTROL PLAN

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. TC2 OF TC10



WESLEY INTERSECTION STREET CLOSURE SIGNING
N.T.S.

N

NTS

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LEGEND

·●·●·	CONES
	TRAFFIC CONTROL SIGNS
	FLAGGER
+++	TYPE III BARRICADE
	DIRECTION OF TRAVEL
	CONSTRUCTION AREA
	FLASHING ARROW SIGN
	TEMPORARY RAILING (TYPE K) CAL TRANS STD T3A
C13	END CONSTRUCTION
C30(CA)	LANE CLOSED
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SC3(CA)	DETOUR W/ STRAIGHT ARROW
W20-1	ROAD WORK AHEAD
W20-2	DETOUR AHEAD
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CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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SEAL-ENGINEER
REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

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41660 IVY STREET, SUITE A MURRIETA, CA 92562
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JOSEPH L. CASTANEDA R.C.E. 59835 DATE 11/19/19

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FLUSH
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RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
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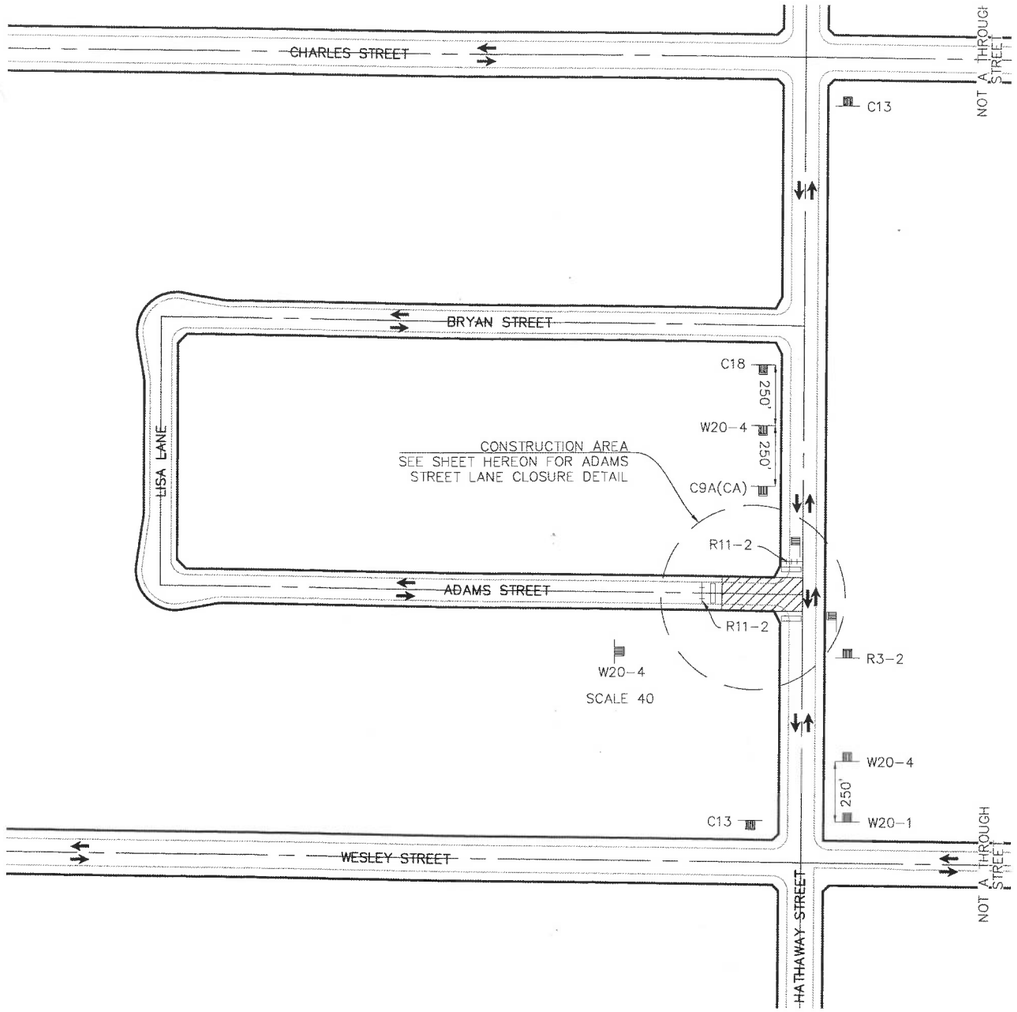
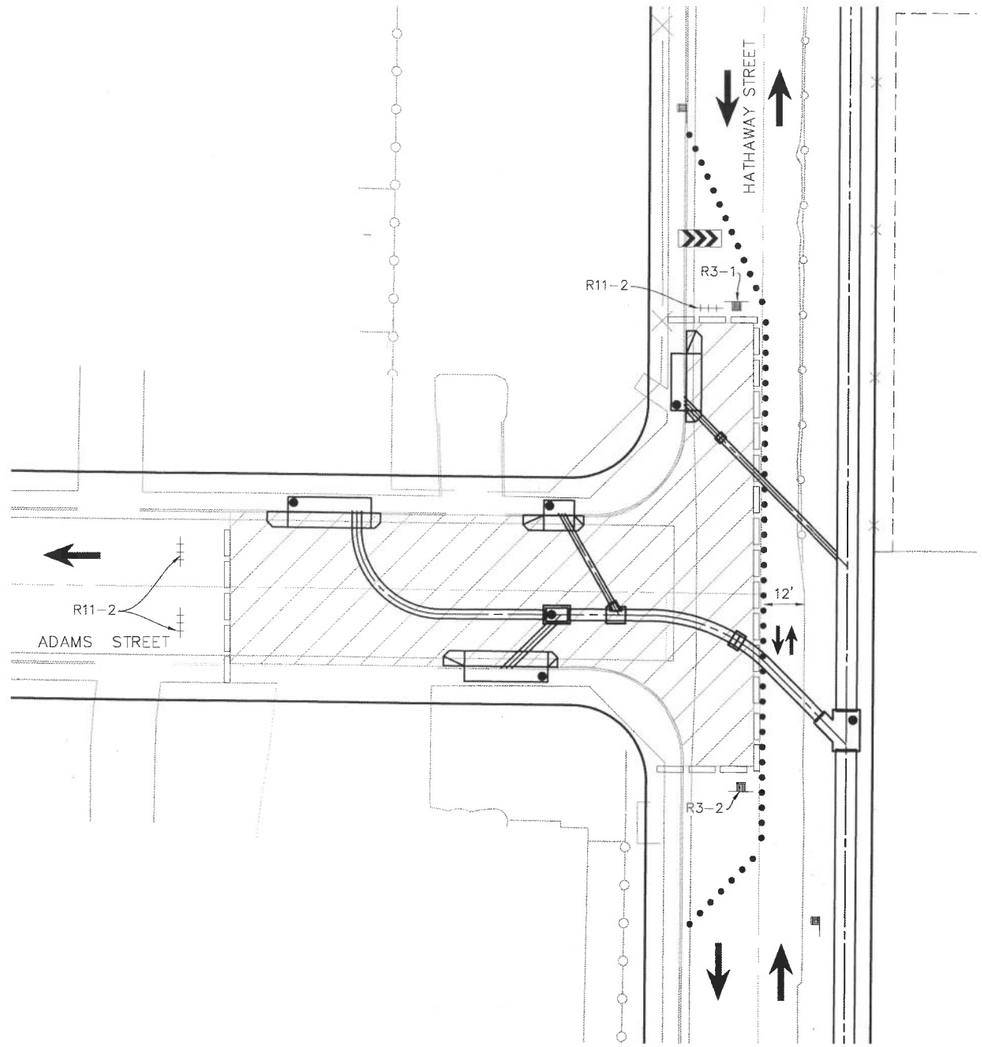
BANNING MDP LINE H STAGE 1

TRAFFIC CONTROL PLAN

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. TC3 OF TC10



ADAMS INTERSECTION STREET DETOUR SIGNING
N.T.S.



ADAMS INTERSECTION DETOUR DETAIL
N.T.S.

LEGEND

	CONES
	TRAFFIC CONTROL SIGNS
	FLAGGER
	TYPE III BARRICADE
	DIRECTION OF TRAVEL
	CONSTRUCTION AREA
	FLASHING ARROW SIGN
	TEMPORARY RAILING (TYPE K) CAL TRANS STD T3A
C13	END CONSTRUCTION
C30(CA)	LANE CLOSED
C9A(CA)	FLAGGER
M4-8	DETOUR
M4-8a	END DETOUR
M4-9R	DETOUR W/ RIGHT ARROW
M4-9L	DETOUR W/ LEFT ARROW
M4-10L	DETOUR LEFT
M4-10R	DETOUR RIGHT
R3-1	NO RIGHT TURN
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R11-2	ROAD CLOSED
R11-4	ROAD CLOSED TO THRU TRAFFIC
SC3(CA)	DETOUR W/ STRAIGHT ARROW
W20-1	ROAD WORK AHEAD
W20-2	DETOUR AHEAD
W20-3	ROAD CLOSED AHEAD
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GENERAL NOTES:

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NTS

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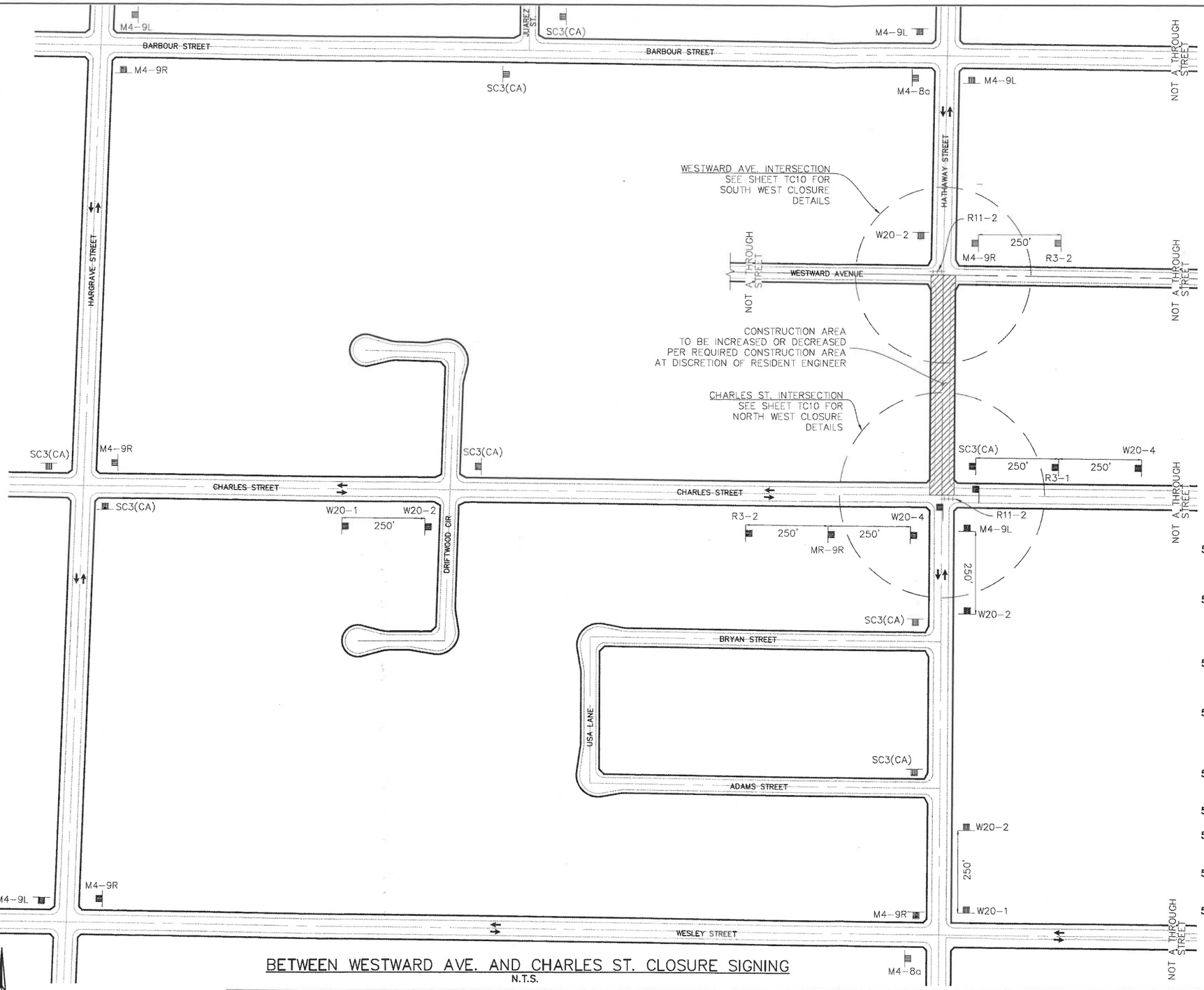
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H
STAGE 1
TRAFFIC CONTROL PLAN

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. TC4 OF TC10

P8\228253

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019



BETWEEN WESTWARD AVE. AND CHARLES ST. CLOSURE SIGNING

N.T.S.

LEGEND

	CONES
	TRAFFIC CONTROL SIGNS
	FLAGGER
	TYPE III BARRICADE
	DIRECTION OF TRAVEL
	CONSTRUCTION AREA
	FLASHING ARROW SIGN
	TEMPORARY RAILING (TYPE K) CAL TRANS STD T3A
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59. POST "NO PARKING" DATE/TIME THROUGH WORK ZONES.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

NTS

Don't Dig...Until You Call U.S.A. Toll Free
1-800-227-2600
for the location of buried utility lines.
Don't disrupt vital services.
TWO WORKING DAYS BEFORE YOU DIG

SEAL-ENGINEER
REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/19 CIVIL STATE OF CALIFORNIA

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG
FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

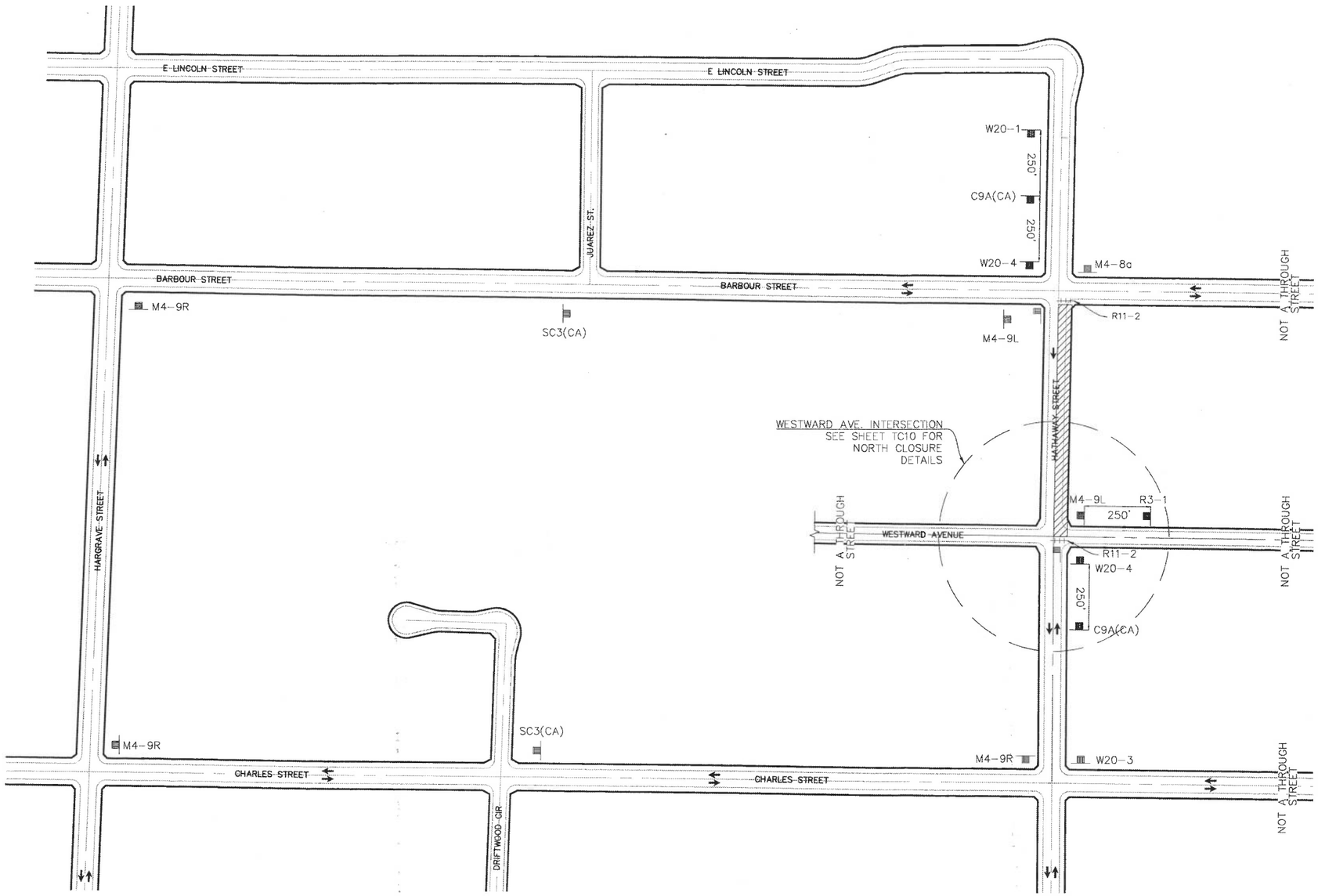
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H STAGE 1

TRAFFIC CONTROL PLAN

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. TC5 OF TC10



BETWEEN BARBOUR ST. AND WESTWARD AVE. CLOSURE SIGNAGE

N.T.S.

N

NTS

LEGEND

·●·●·	CONES
	TRAFFIC CONTROL SIGNS
	FLAGGER
+++	TYPE III BARRICADE
	DIRECTION OF TRAVEL
	CONSTRUCTION AREA
	FLASHING ARROW SIGN
	TEMPORARY RAILING (TYPE K) CAL TRANS STD T3A
C13	END CONSTRUCTION
C30(CA)	LANE CLOSED
C9A(CA)	FLAGGER
M4-8	DETOUR
M4-8a	END DETOUR
M4-9R	DETOUR W/ RIGHT ARROW
M4-9L	DETOUR W/ LEFT ARROW
M4-10L	DETOUR LEFT
M4-10R	DETOUR RIGHT
R3-1	NO RIGHT TURN
R3-2	NO LEFT TURN
R11-2	ROAD CLOSED
R11-4	ROAD CLOSED TO THRU TRAFFIC
SC3(CA)	DETOUR W/ STRAIGHT ARROW
W20-1	ROAD WORK AHEAD
W20-2	DETOUR AHEAD
W20-3	ROAD CLOSED AHEAD
W20-4	ONE LANE ROAD AHEAD

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CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

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ELEV=2150.48 FT.
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REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

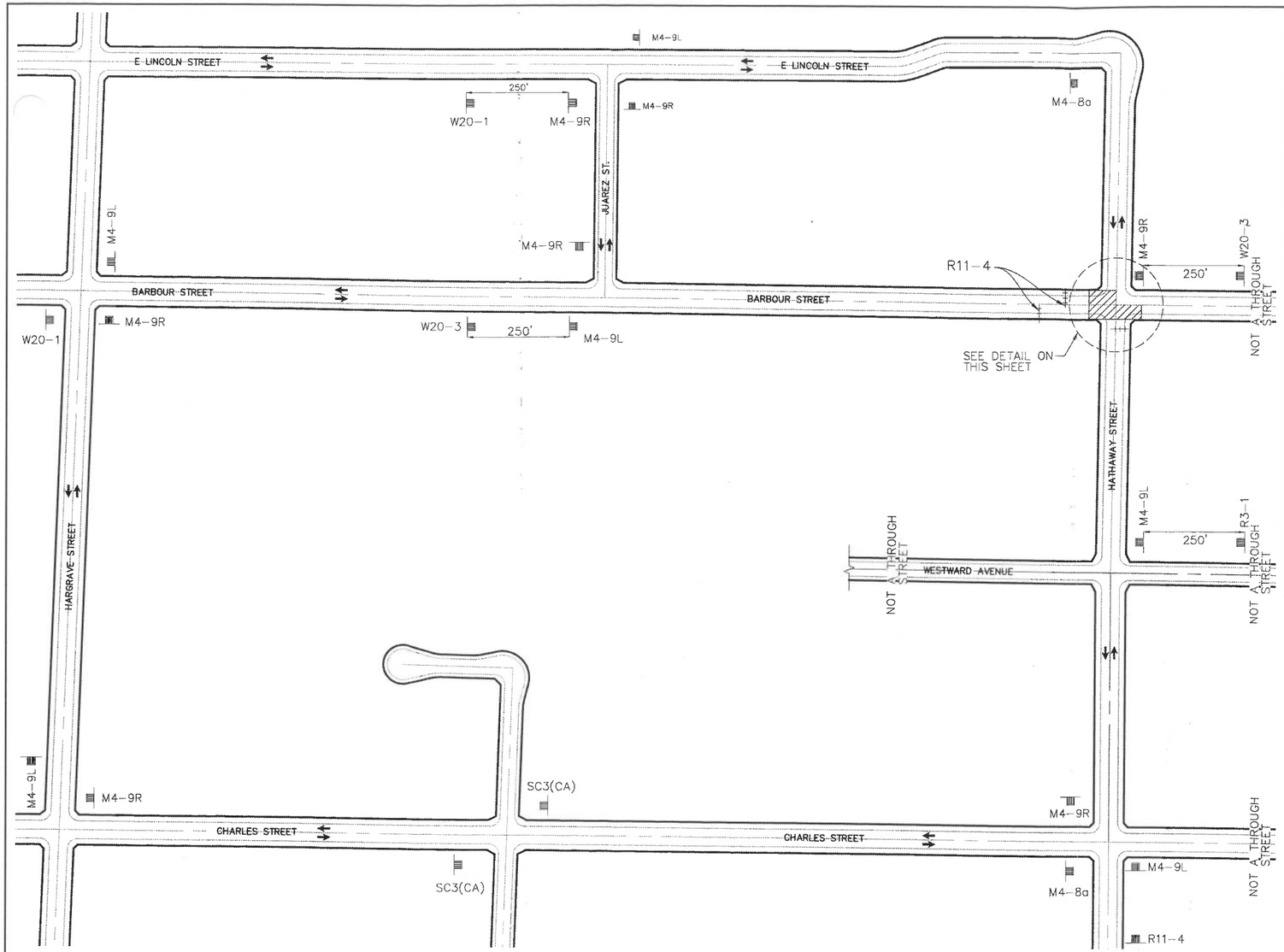
CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE: 11/21/19
APPROVED BY: DATE: 11/25/19

BANNING MDP LINE H STAGE 1

TRAFFIC CONTROL PLAN

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. TC6 OF TC10



SOUTH BARBOUR INTERSECTION CLOSURE SIGNAGE
N.T.S.

LEGEND

	CONES
	TRAFFIC CONTROL SIGNS
	FLAGGER
	TYPE III BARRICADE
	DIRECTION OF TRAVEL
	CONSTRUCTION AREA
	FLASHING ARROW SIGN
	TEMPORARY RAILING (TYPE K) CAL TRANS STD T3A
C13	END CONSTRUCTION
C30(CA)	LANE CLOSED
C9A(CA)	FLAGGER
M4-8	DETOUR
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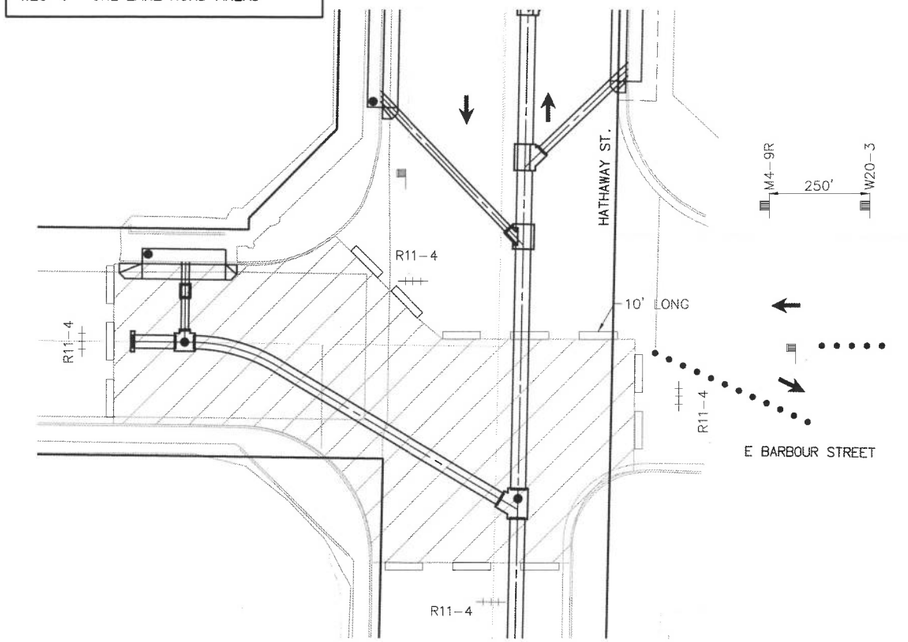

BARBOUR INTERSECTION DETAIL
N.T.S.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

N

NTS

P8\228253

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Joseph L. Castaneda 11/19/19
JOSEPH L. CASTANEDA R.C.E. 59835 DATE

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DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY:
DATE: 11/21/19
APPROVED BY:
DATE: 11/25/19

BANNING MDP LINE H STAGE 1

TRAFFIC CONTROL PLAN

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. TC7 OF TC10

LEGEND

·●·●·	CONES
	TRAFFIC CONTROL SIGNS
	FLAGGER
+++	TYPE III BARRICADE
	DIRECTION OF TRAVEL
	CONSTRUCTION AREA
	FLASHING ARROW SIGN
	TEMPORARY RAILING (TYPE K) CAL TRANS STD T3A
C13	END CONSTRUCTION
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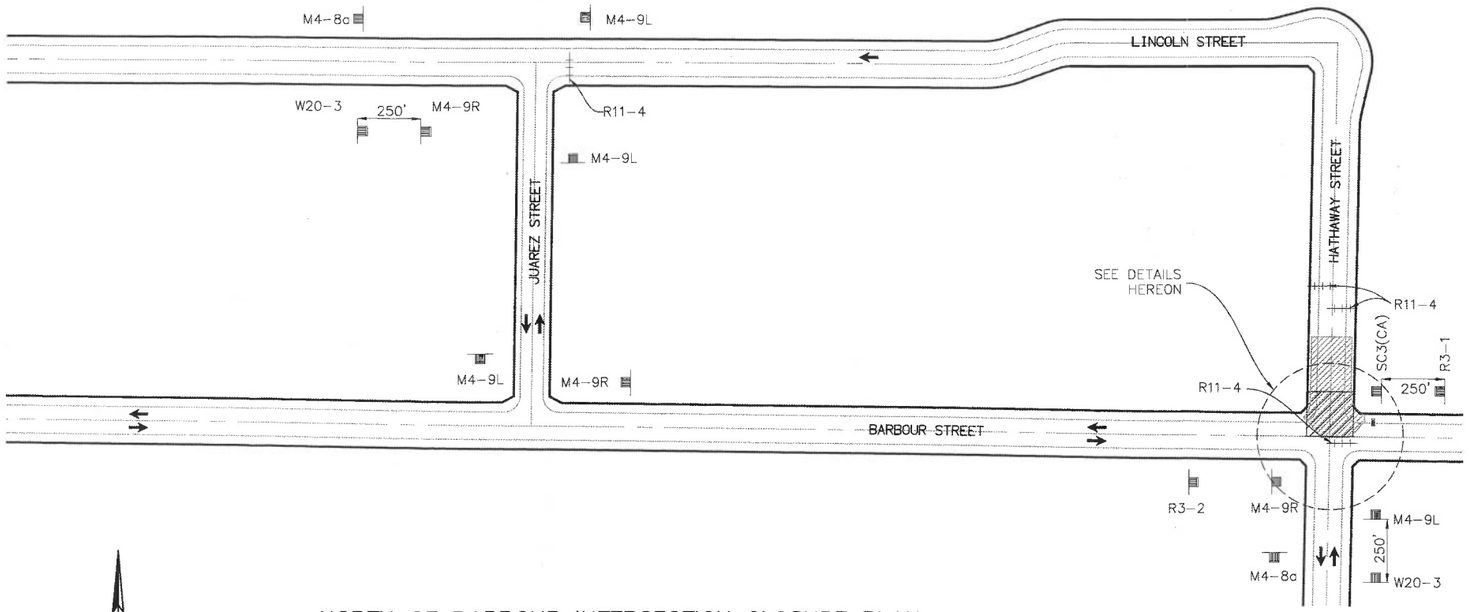
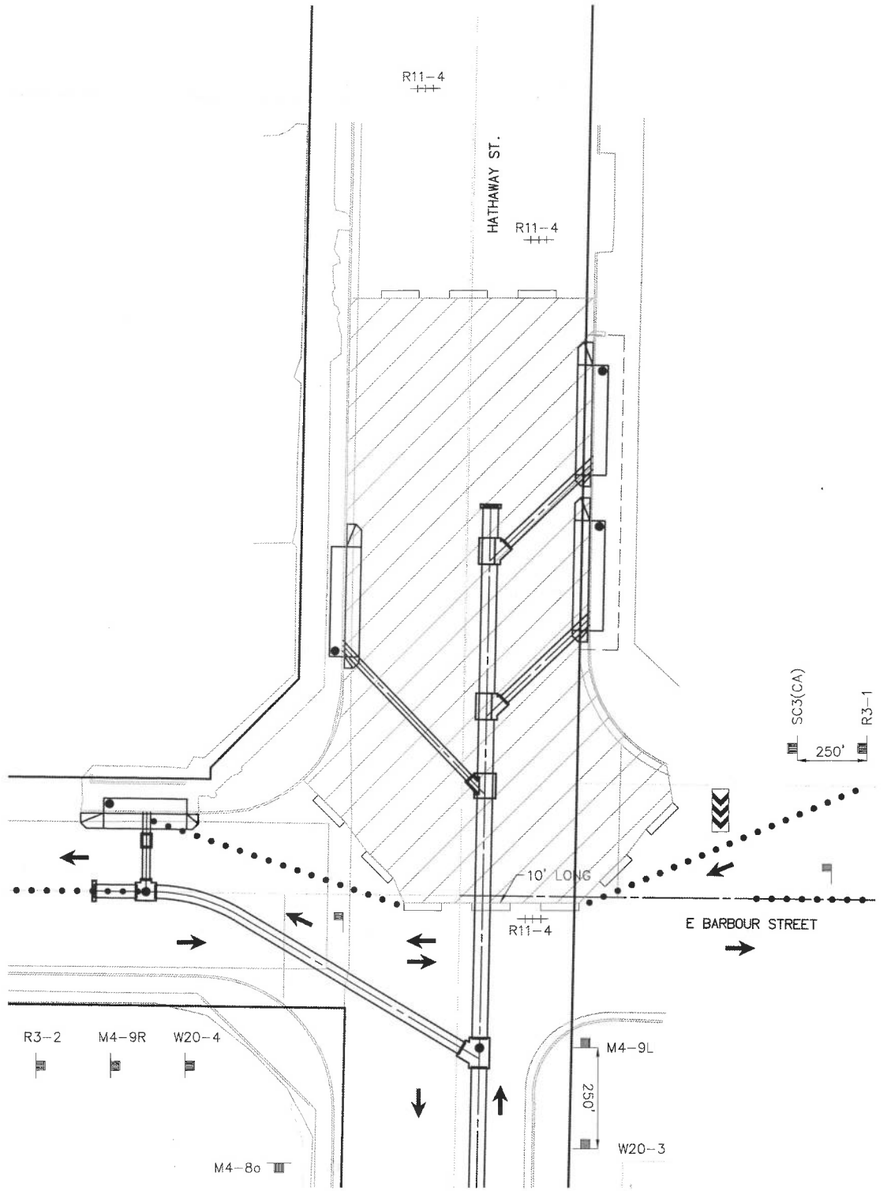


NORTH OF BARBOUR INTERSECTION CLOSURE PLAN
N.T.S.



NORTH OF BARBOUR INTERSECTION CLOSURE DETAIL
N.T.S.

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

N

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Joseph L. Castaneda 11/19/19
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BENCHMARK:
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W/ RCE 13191 TAG FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV= 2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

CITY OF BANNING
APPROVED BY:
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

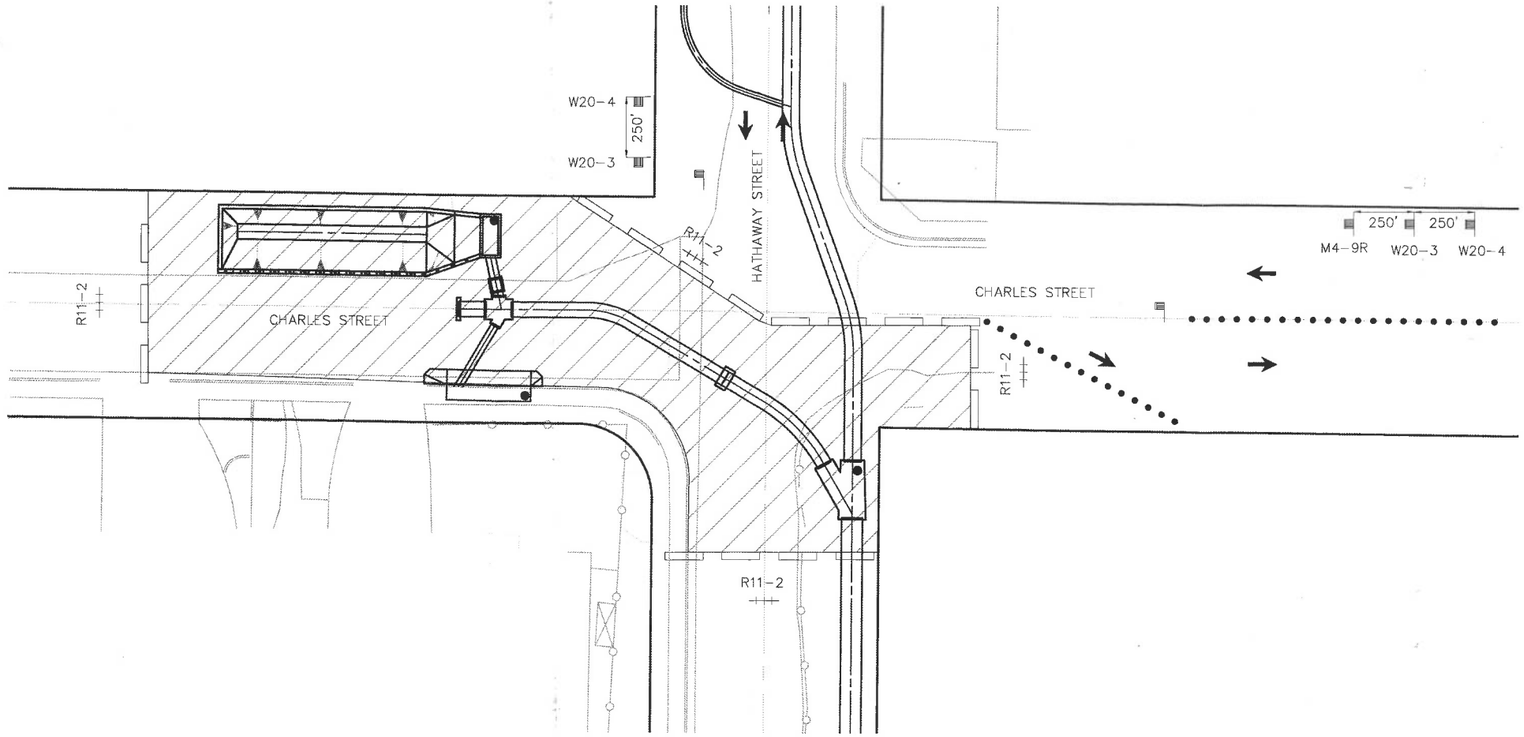
RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
RECOMMENDED FOR APPROVAL BY: DATE: 11/21/19
APPROVED BY: DATE: 11/25/19

BANNING MDP LINE H STAGE 1

TRAFFIC CONTROL PLAN

P8\228253

PROJECT NO. 5-0-0177-01
DRAWING NO. 5-0224
SHEET NO. TC8 OF TC10



SOUTH CHARLES ST. AND HATHAWAY ST. INTERSECTION DETAIL

N.T.S.

(SEE SHEET TC3 FOR STREET CLOSURE SIGNING)

LEGEND

·•·•·	CONES
	TRAFFIC CONTROL SIGNS
	FLAGGER
+++	TYPE III BARRICADE
	DIRECTION OF TRAVEL
	TEMPORARAY PAVING
	CONSTRUCTION AREA
	FLASHING ARROW SIGN
	TEMPORARY RAILING (TYPE K) CAL TRANS STD T3A
C13	END CONSTRUCTION
C18	ROAD CONSTRUCTION AHEAD
C30(CA)	LANE CLOSED
M4-8	DETOUR
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R3-1	NO RIGHT TURN
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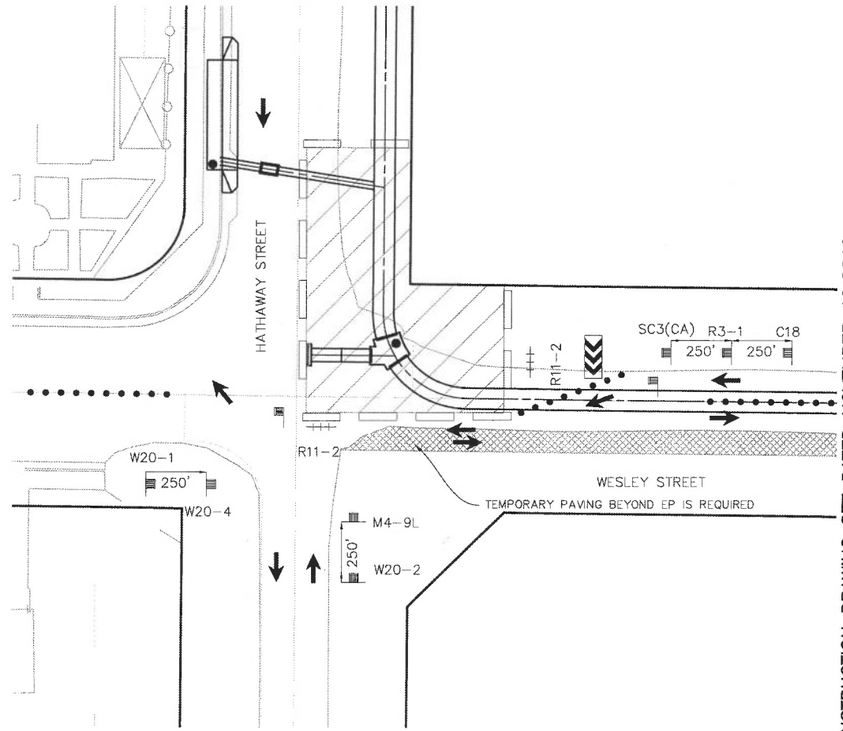

WESLEY STREET AND HATHAWAY STREET INTERSECTION DETAIL

N.T.S.

(SEE SHEET TC2 FOR STREET CLOSURE SIGNING)

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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JOSEPH L. CASTANEDA R.C.E. 59835 — DATE 11/19/19

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CITY OF BANNING

APPROVED BY: _____ CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: _____ DATE: 11/21/19

APPROVED BY: _____ DATE: 11/25/19

BANNING MDP LINE H STAGE 1

TRAFFIC CONTROL PLAN

PROJECT NO. 5-0-0177-01

DRAWING NO. 5-0224

SHEET NO. TC9 OF TC10

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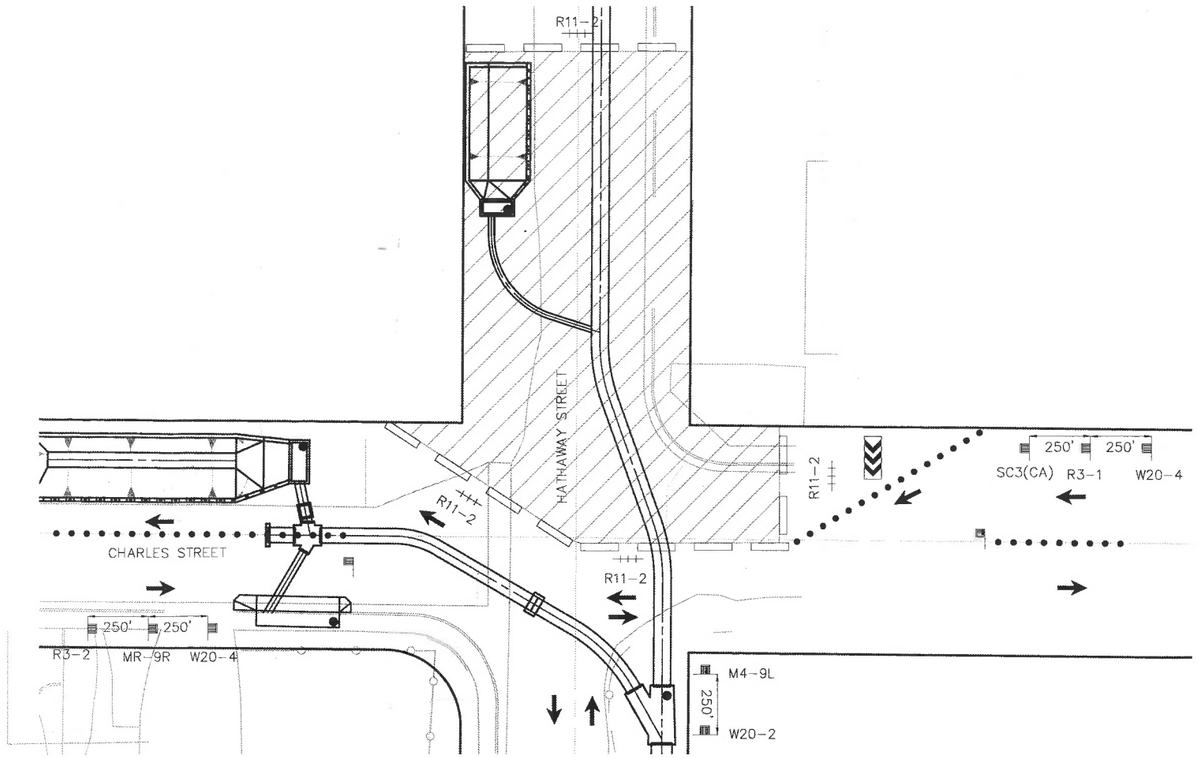
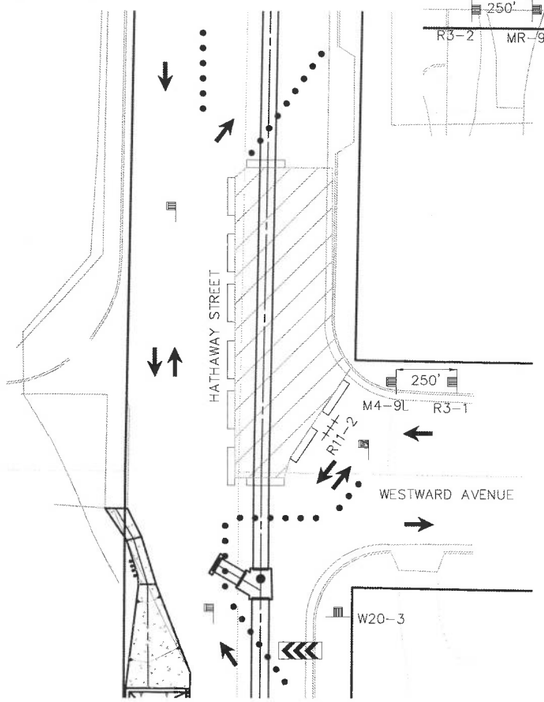


NORTH CHARLES ST. AND HATHAWAY ST. INTERSECTION DETAIL

N.T.S.

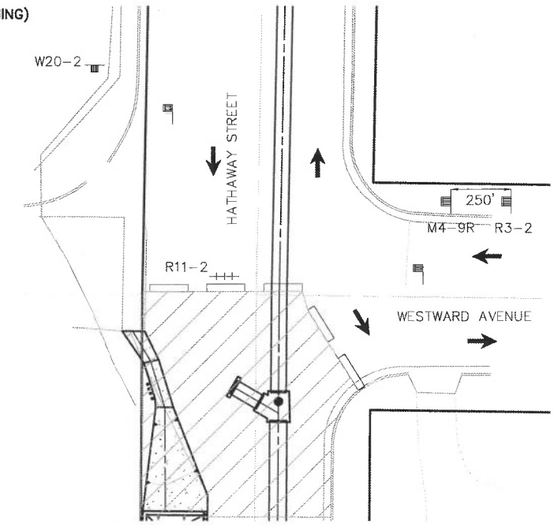
(SEE SHEET TC5 FOR STREET CLOSURE SIGNING)



NORTH WESTWARD AVE. AND HATHAWAY ST. INTERSECTION DETAIL

N.T.S.

(SEE SHEET TC6 FOR STREET CLOSURE SIGNING)



SOUTH WESTWARD AVE. AND HATHAWAY ST. INTERSECTION DETAIL

N.T.S.

(SEE SHEET TC5 FOR STREET CLOSURE SIGNING)

NTS

LEGEND

·•·•·	CONES
	TRAFFIC CONTROL SIGNS
	FLAGGER
+++	TYPE III BARRICADE
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	CONSTRUCTION AREA
	FLASHING ARROW SIGN
	TEMPORARY RAILING (TYPE K) CAL TRANS STD T3A
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R3-2	NO LEFT TURN
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R11-4	ROAD CLOSED TO THRU TRAFFIC
SC3(CA)	DETOUR W/ STRAIGHT ARROW
W20-1	ROAD WORK AHEAD
W20-2	DETOUR AHEAD
W20-3	ROAD CLOSED AHEAD
W20-4	ONE LANE ROAD AHEAD

CONSTRUCTION DRAWING SET DATED NOVEMBER 19,2019

P8\228253

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PH. 951.304.9552 FAX 951.304.3568

JOSEPH L. CASTANEDA R.C.E. 59835 — 11/19/19 DATE

BENCHMARK:
Z 14059
1" IP
W/ RCE 13191 TAG
FLUSH
INTERSECTION OF HATHAWAY ST. AND WESLEY ST.
ELEV=2150.48 FT.
DATUM: NAVD 88

REVISIONS			
REF.	DESCRIPTION	APPR.	DATE

CITY OF BANNING

APPROVED BY: _____
CITY ENGINEER
ARTURO VELA
DATE: 11/21/19

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: _____
DATE: 11/21/19

APPROVED BY: _____
DATE: 11/25/19

BANNING MDP LINE H STAGE 1

TRAFFIC CONTROL PLAN

PROJECT NO. 5-0-0177-01

DRAWING NO. 5-0224

SHEET NO. TC10 OF TC10