3 | Drainage Report Addendum (February 2020) Preliminary Drainage Report (February 2019)

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Serious drought.
Help save water!

To: CIRILO SALILICAN, Design Engineer
Design M-14
District 3-Marysville

Date: February 05, 2020

File: 01-MEN-01-PM 59.8/62.1
01-0B220 (0112000110)
Fort Bragg ADA

From: EDWARD WORDEN
North Region Hydraulics
District 1- Eureka

Subject: **Addendum to Preliminary Drainage Recommendations**

This is an Addendum to the Preliminary Drainage Report prepared by Artin Merati dated February 14, 2019. The project proposes to replace the existing curb ramps with ADA compliant pedestrian facilities, place new sidewalks at gaps, construct a new sidewalk, and install or upgrade existing drainage systems.

At this stage of the project, it is estimated that 37 curb ramps will be constructed and/or reconstructed to ADA compliant curb ramps and approximately 2,200 linear feet of new sidewalk will be constructed to bridge the existing gaps in the pedestrian system. This scope of work results in repairing and upgrading the existing drainage facilities and features including culvert extension, drainage inlet replacement, and adding new drainage systems.

General Recommendations:

- Include a concrete collar for pipe to pipe connection/extensions.
- Consider replacing DI's that are to be relocated.
- DIs that are extended/relocated add an additional 4' of pipe into the quantities for extensions.
- As-builts have RCP and 18" CSP pipes, add quantities for extensions when tying into these systems.

Conclusion:

As this project is in the early design phase recommendations are preliminary and further evaluation can only occur with utilization of other resources in the next project phase. If you have questions or concerns, please contact our office at (707) 441-5728.

cc: 1 Cirilo Salilican, Project Engineer
2. Steven Blair, Project Manager
3. Project files

EGW

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M e m o r a n d u m

To: Sumandeep Sudini, Project Engineer
Design – M14
District 3 – Marysville

Date: Feb 14, 2019

File: 01-Men-01-PM 59.8 / 62.1
01-0B220 (01 1200 0110)
Fort Bragg ADA

From: Artin Merati
North Region Capital Hydraulics
District 1- Eureka

Subject: **PRELIMINARY DRAINAGE REPORT**

At the request of District 3 Design for a Preliminary Drainage Report on Oct 19, 2019, for Fort Bragg ADA project, NR Hydraulic staff has reviewed the project. The project proposes to replace the existing curb ramps with ADA compliant pedestrian facilities, place new sidewalk, install high visibility signing & stripping at crosswalks, and install or retrofit existing drainage systems along with relocation of utility infrastructures.

At this stage of the project, it is estimated that over 40 curbs will be upgraded to ADA compliant curb ramps and approximately one mile of new sidewalk will be constructed to fill in existing gaps in the pedestrian system. This scope of work will include repairing and upgrading the existing drainage facilities and features including culvert extension, drainage inlet replacement and upgrading existing drainage systems.

RAINFALL & CLIMATE DATA

The data station close to this project is the Fort Bragg station with COOP[1] ID (043161), 4.5 miles NE of the project finishing location, as shown on the map in Figure.1. The station data is also tabulated in Table.1.

The average annual rainfall is 40.24 inches, with the maximum of 7.61 inches of rain in January, an Average Monthly Minimum January Temperature of 39.9 degrees Fahrenheit and an Average Monthly Maximum Temperature is September of 65.6 degrees Fahrenheit.

Rainfall gaging stations were obtained from the north region climate center.

[1] Cooperative Observer Network

Table.1 Climate / Rainfall Data

FT BRAGG 5 N, CALIFORNIA (043161)

Period of Record Monthly Climate Summary

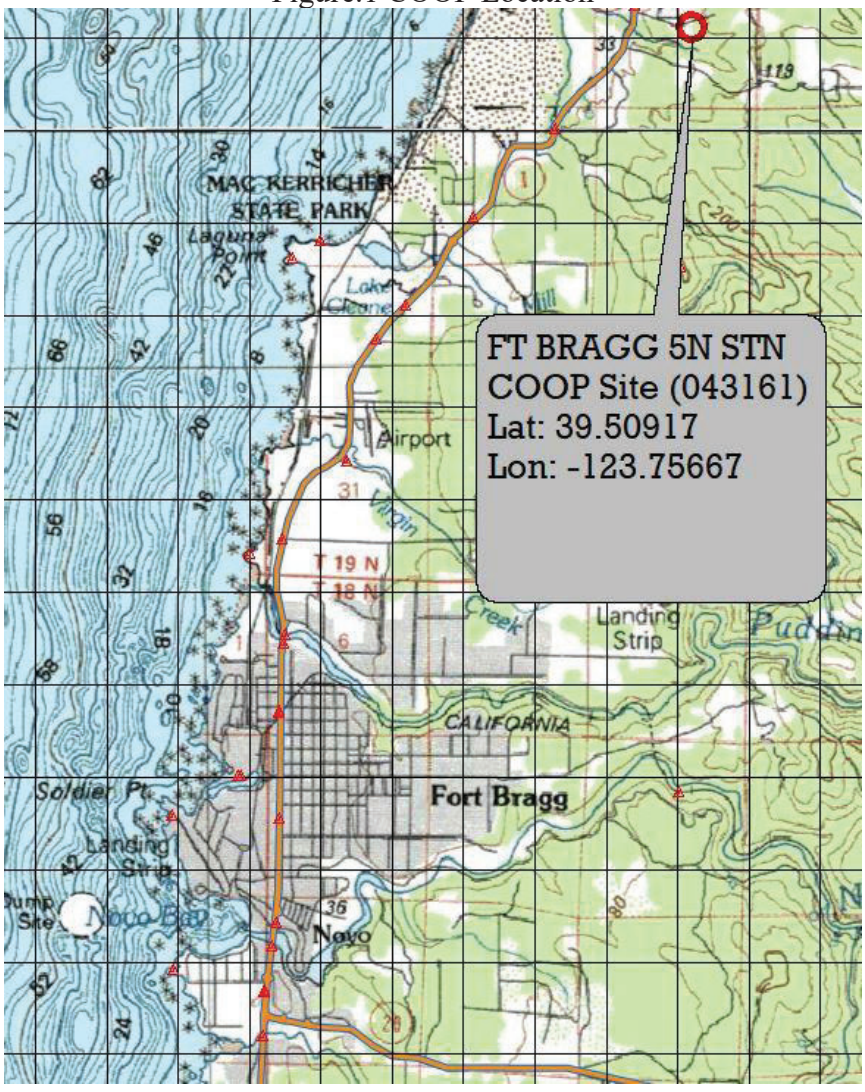
Period of Record : 05/01/1895 to 06/09/2016

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	55.5	56.6	57.6	59.0	61.4	63.7	64.8	65.1	65.6	63.4	59.4	55.9	60.6
Average Min. Temperature (F)	39.9	40.7	41.6	43.1	45.7	48.3	49.4	49.6	49.1	46.7	43.3	40.6	44.8
Average Total Precipitation (in.)	7.61	6.29	5.27	3.06	1.43	0.62	0.11	0.26	0.59	2.61	5.42	6.96	40.24
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 97.5% Min. Temp.: 97.2% Precipitation: 97.7% Snowfall: 97.9% Snow Depth: 97.9%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Figure.1 COOP Location

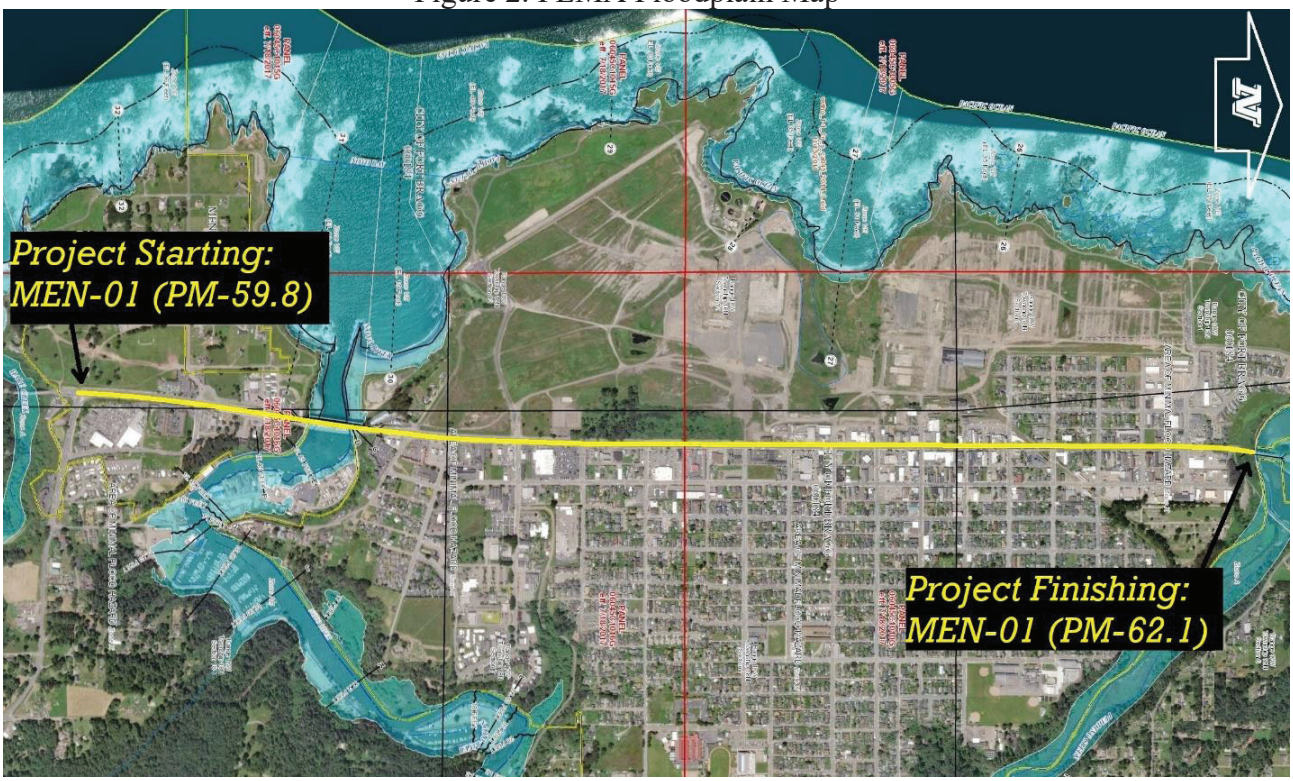


FLOODPLAIN EVALUATION

A digital version of the map panel from National Flood Hazard Layer (NFHL) for the project location is presented in Figure 2 and attached along with the signed Floodplain Evaluation Report Summary form in attachment-1 of this document.

The project limit lies within FEMA panel numbers #06045C1016G and #06045C1010G effective on 07/18/2017. The proposed project falls mainly on Zone X (unshaded), which is classified as, areas with 0.2% annual chance flood hazard or areas of 1% annual chance flood with average depth less than 1' or with drainage areas of less than one square mile. Part of the project on the Noyo River bridge falls in Zone AE, corresponding to SFHA zone, defined as areas with available base flood elevation (BFE) ranges. No construction activity is proposed in the Zone AE floodplain.

Figure 2. FEMA Floodplain Map



HYDROLOGY

Rainfall intensities with duration and frequency estimates are based on the 5-min time of concentration for roadway, also the rainfall depth for 2-year 24-hour, from National Oceanic and Atmospheric Administration (NOAA) Atlas 14 are listed in Table.2.

Table.2 Precipitation Frequency (PF) Estimates

Recurrence Interval (For T_c= 5-min)	**Precipitation Intensity**
5 (yr.)	3.30 (in/hr)
10 (yr.)	4.06 (in/hr)
25 (yr.)	5.00 (in/hr)
50 (yr.)	5.70 (in/hr)
100 (yr.)	6.37 (in/hr)
Duration	**Precipitation Depth**
2-year 24-hour	3.07 (In.)

INSTALLING ADA COMPLIANT CURB RAMPS:

- Existing at grade curbs on corners:

Existing corner curbs in this project limits have the AC pavement flush with top of the curb, without an actual ramp on the sidewalk or curb.

- Recommendation:

There are 2 scenarios for making the existing curbs compliant with ADA:

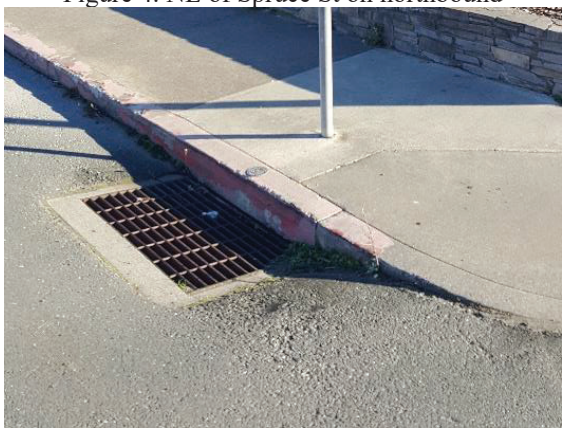
1- Adding a detectable warning surface to the existing, at grade curbs:

This alternative would not change the existing drainage patterns, although the existing drainage depression made by the constructed pavement ramps next to the drainage inlets, as shown in Figure 3 and Figure 4, should get fixed, by relocating the existing drainage inlets away from the crosswalk and transition area in the pavement.

Gutter pan slopes will need to be constructed based on the Standard Plan detail A88A (1" of depth for each 2' of width) to drain the runoff and existing debris to the adjacent drainage inlets.

Figure 3. SE of Hazel St on northbound

Figure 4. NE of Spruce St on northbound



2- Installing standard ADA compliant curb ramp with standard flared areas and ramp clear space.

This alternative requires grinding the existing AC pavement along the curb, with wrapping the road cross/longitudinal slope towards the curb, away from the ramp clear space, and into the adjacent inlets.

The constructability study of this alternative is necessary due to existing flat areas in the city of Fort Bragg and pending the updated survey data and final designed geometry of each curb ramp with their transition length.

The existing drainage inlets will need to be relocated, gutter pan transition and counter slopes near inlets should be constructed to drain the runoff into the DIs. Sedimentation issues need to be addressed to prevent discharge of debris and sediment into the DIs. Some existing curb ramps along with their drainage issues are shown in Figure 5 and Figure 6.

Figure 5. SW of Bush St on Southbound

Figure 6. SW of Spruce St on Southbound

- Existing Curb ramps:

There are existing curb ramps (newly constructed) along this stretch of highway in the City of Fort Bragg, proposed for ADA ramp reconstruction in the design layout dated October 2018.

These curb ramps do not have any evidential drainage pattern issues, and it is recommended to keep the drainage slopes to the adjacent inlets if there are any construction activities proposed for these locations.

GENERAL RECOMMENDATIONS:

- Please review the attached layouts including comments and recommendations pertaining to drainage in attachment-3.
- Work location matrix prepared during the previous phase of this project has been updated and attached to this document in attachment-5.
- Gutter spread calculation is performed and attached to this document in attachment-2.
- It is recommended to consider using the standard inlet grates within the bike lane width, compliant with bike travelers.
- The curb ramp clear space, and gutter connection, need to be designed by constructing counter slopes so water and debris do not accumulate at the base of the ramp or on the detectable warning surface, to meet ADA compliance for waterflow and drainage.
- Runoff water, sedimentation and debris should be discharged away from the curb ramp, by designing smooth gutters (no lip between the ramp and gutter) with continuous slopes that guide the water flow away from ramp clear space.
- Gutter pan slopes are needed to be constructed based on the standard plan specifications Plan#A88A (1" of depth for each 2' of width) to drain the runoff and existing debris to the adjacent drainage inlets.
- Pending the geotechnical unit review for drainage of the proposed retaining wall in ESL-1&2 layouts, it is recommended to place grade line ditches (or Transverse drain pipe/channels) under the sidewalk next to the retaining wall with the retaining wall drainage system connected to it.
- Adding curb ramps results in moving and replacing the existing drainage inlets and with this scenario, further design will be needed for the drainage systems.

SEDIMENTATION AND GUTTER SPREAD

Due to the existing sedimentation and debris around the inlets, along the side curbs and on curb ramps, gutter spread analysis were performed at specific locations (as delineated and commented on the attached layout) and the calculation results are in attachment-2 of this document.

Survey data was not available at the time this hydraulic calculation was completed. Lidar Data (US Elevation Data with 10m Resolution) was obtained from USGS website and used for this calculation. Updated survey data shall be utilized in further project phases to validate the accuracy of performed hydraulic calculations.

CULVERT DATABASE SUMMARY

There are several cross/longitudinal culverts and drainage systems listed within the postmile limits. Culvert specifications are summarized from the statewide culvert website, Division of Maintenance, and also the district's culvert database and attached in this document, they are provided for informational purposes only

The culvert inspection data may be outdated, and reinspection may return a revised condition status that would support repair to additional locations. It is recommended to request an updated inspection to obtain asset funding if capital funds are needed to supplement the ADA program for this project.

CONCLUSION

In the next phase of the project, once survey data are completed and curb ramp design is determined, more information will be identified to be considered in hydraulic report and hydraulic calculations should be refined.

Summary of drainage work can be found in the attachment titled "Updated work location matrix". Also, a layout which includes drainage recommendations is attached in this document.

Recommendation are preliminary and greater depth of understanding and evaluation can only occur with utilization of other resources in the next project phase. Resources include but are not limited to: NR Surveys, Geotechnical, Materials, Traffic operation and Traffic Safety recommendations. If you have questions, please contact our office at (707) 441-5728.

Attachments:
- Floodplain Evaluation Report Summary (FERS).
- Gutter spread calculation.
- Drainage Recommendations on Design Layout.
- Hydraulic Maintenance Culvert Database.
- Updated work location matrix.

Cc: 1. Steven Blair, Project Manager
2. Sumandeep Sudini, Project Engineer
3. Project files

A.M:a.m.

ATTACHMENT 1

FLOODPLAIN EVALUATION REPORT SUMMARY

FLOODPLAIN EVALUATION REPORT SUMMARY

District: 01 **County:** MEN **Route:** 01 **P.M.:** 59.8 / 62.1
Project EA: 01-0B220 **EFIS Project ID:** 01-1200-0110 **Bridge Number:** n/a

Limits: This project is located along Highway 01 in Mendocino county, starting form PM-59.80 and ending at PM-62.10, close to the city of Fort Bragg. This project proposes to replace existing curb ramps with ADA compliant pedestrian facilities, place new sidewalk where none exist, install high visibility signing & stripping at crosswalks, construct a new sidewalk, and install or upgrade existing drainage systems along with relocation of utility infrastructure.
It is estimated that over 40 curbs will be upgraded to ADA compliant curb ramps and approximately one mile of new sidewalk will be used to fill in existing gaps in the pedestrian system.

Floodplain Description: The proposed project starts 600 feet from the north of Hare Creek and 2300 feet from the southern bank of Noyo River, and finishes on just north of Fort Bragg, at the southern bank of Pudding Creek. The roadway is a straight four-lane highway in this range. The project spans Flood Insurance Rate Maps (FIRMs) Panel #06045C11016G and Panel #06045C1010G Map Indexes effective July 18, 2017, shows the project boundaries falls within two defined flood Zones along the Highway. Zone X (unshaded), which classified as, areas with 0.2% annual chance flood hazard or areas of 1% annual chance flood with average depth less than 1' or with drainage areas of less than one square mile. Zone AE, corresponds to SFHA zone, defined as areas with available base flood elevation (BFE) ranges. The proposed scope of work for this project is not within the floodplain and construction activities are not expected to have impacts on floodplain.

		No	Yes
1.	Is the proposed action a longitudinal encroachment of the base floodplain?	x	
2.	Are the risks associated with the implementation of the proposed action significant?	x	
3.	Will the proposed action support probable incompatible floodplain development?	x	
4.	Are there any significant impacts on natural and beneficial floodplain values?	x	
5.	Routine construction procedures are required to minimize impacts on the floodplain. Are there any special mitigation measures necessary to minimize impacts or restore and preserve natural and beneficial floodplain values? If yes, explain.	x	
6.	Does the proposed action constitute a significant floodplain encroachment as defined in 23 CFR, Section 650.105(q)?	x	
7.	Are Floodplain Hydraulic Studies that document the above answers on file? If not explain.		x

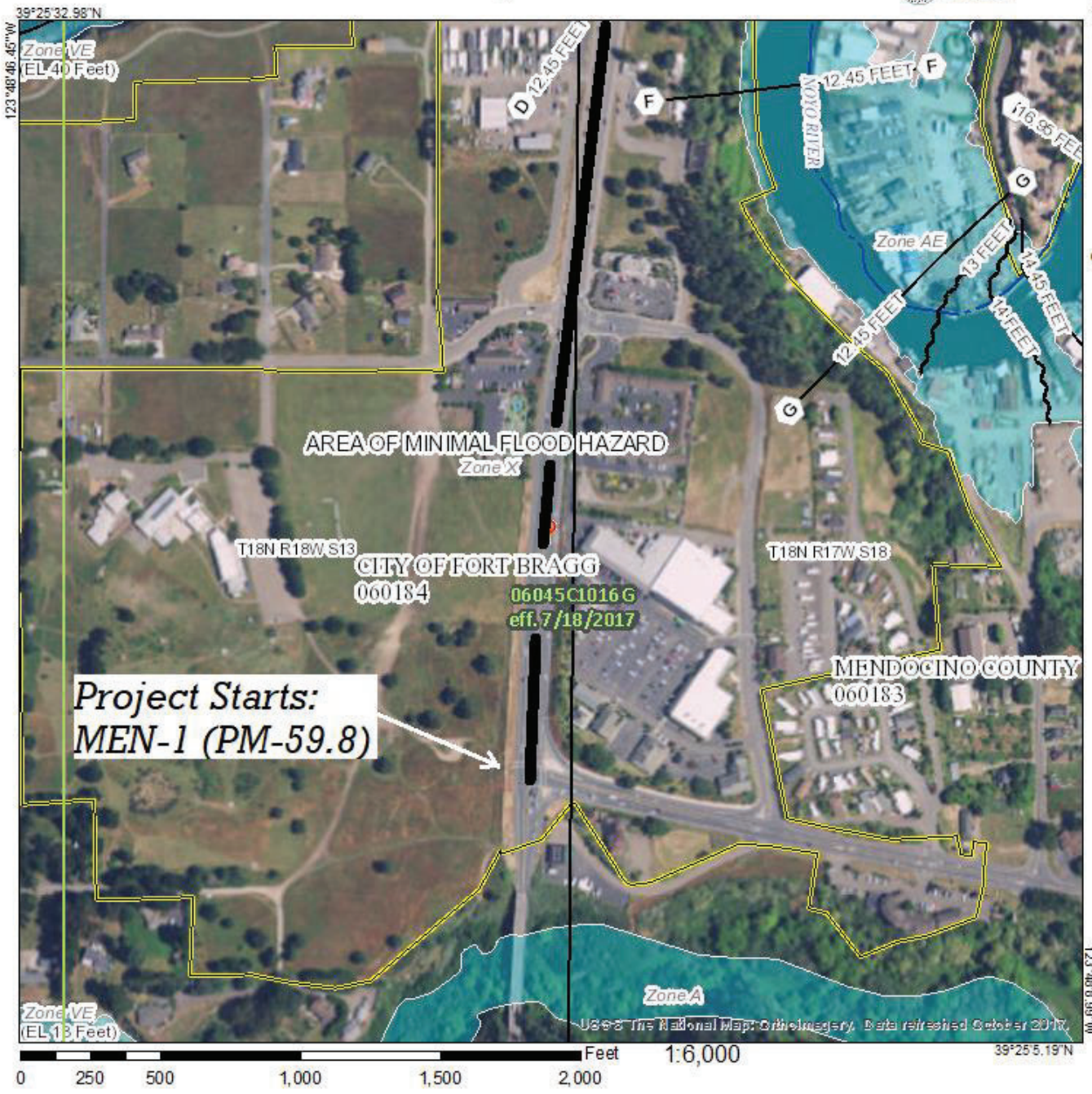
PREPARED BY:

Signature - Dist. Hydraulic Engineer — Date: 2/11/19

Signature - Dist. Environmental Branch Chief — Date

Signature - Dist. Project Engineer — Date

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- **SPECIAL FLOOD HAZARD AREAS**
  - Without Base Flood Elevation (BFE) — Zone A, V, A99
  - With BFE or Depth — Zone AE, AO, AH, VE, AR
  - Regulatory Floodway
- **OTHER AREAS OF FLOOD HAZARD**
  - 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile — Zone X
  - Future Conditions 1% Annual Chance Flood Hazard — Zone X
  - Area with Reduced Flood Risk due to Levee. See Notes. — Zone X
  - Area with Flood Risk due to Levee — Zone D
- **OTHER AREAS**
  - NO SCREEN — Area of Minimal Flood Hazard — Zone X
  - Effective LOMRs
  - Area of Undetermined Flood Hazard — Zone D
- **GENERAL STRUCTURES**
  - Channel, Culvert, or Storm Sewer
  - Levee, Dike, or Floodwall
- **OTHER FEATURES**
  - 20.2 / 17.5 — Cross Sections with 1% Annual Chance Water Surface Elevation
  - Coastal Transect
  - Base Flood Elevation Line (BFE)
  - Limit of Study
  - Jurisdiction Boundary
  - Coastal Transect Baseline
  - Profile Baseline
  - Hydrographic Feature
- **MAP PANELS**
  - Digital Data Available
  - No Digital Data Available
  - Unmapped

N

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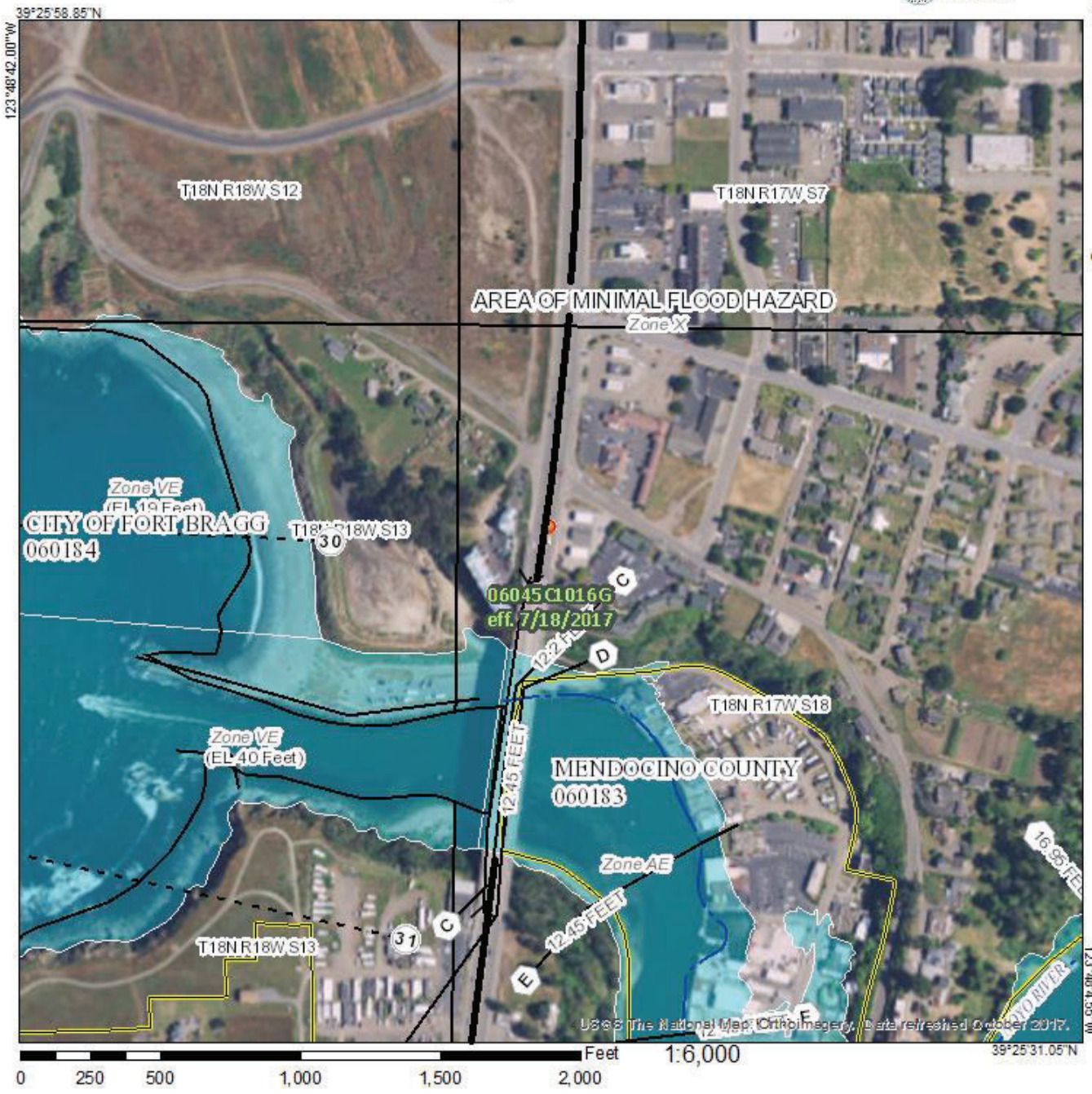
National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) Zone A, V, A99
- With BFE or Depth Zone AE, AO, AH, VE, AR
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
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- Area with Reduced Flood Risk due to Levee. See Notes. Zone X
- Area with Flood Risk due to Levee Zone D

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard Zone X
- Effective LOMRs
- Area of Undetermined Flood Hazard Zone D

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
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MAP PANELS
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National Flood Hazard Layer FIRMette

Legend

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  - Without Base Flood Elevation (BFE) Zone A, V, A99
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National Flood Hazard Layer FIRMette

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National Flood Hazard Layer FIRMette

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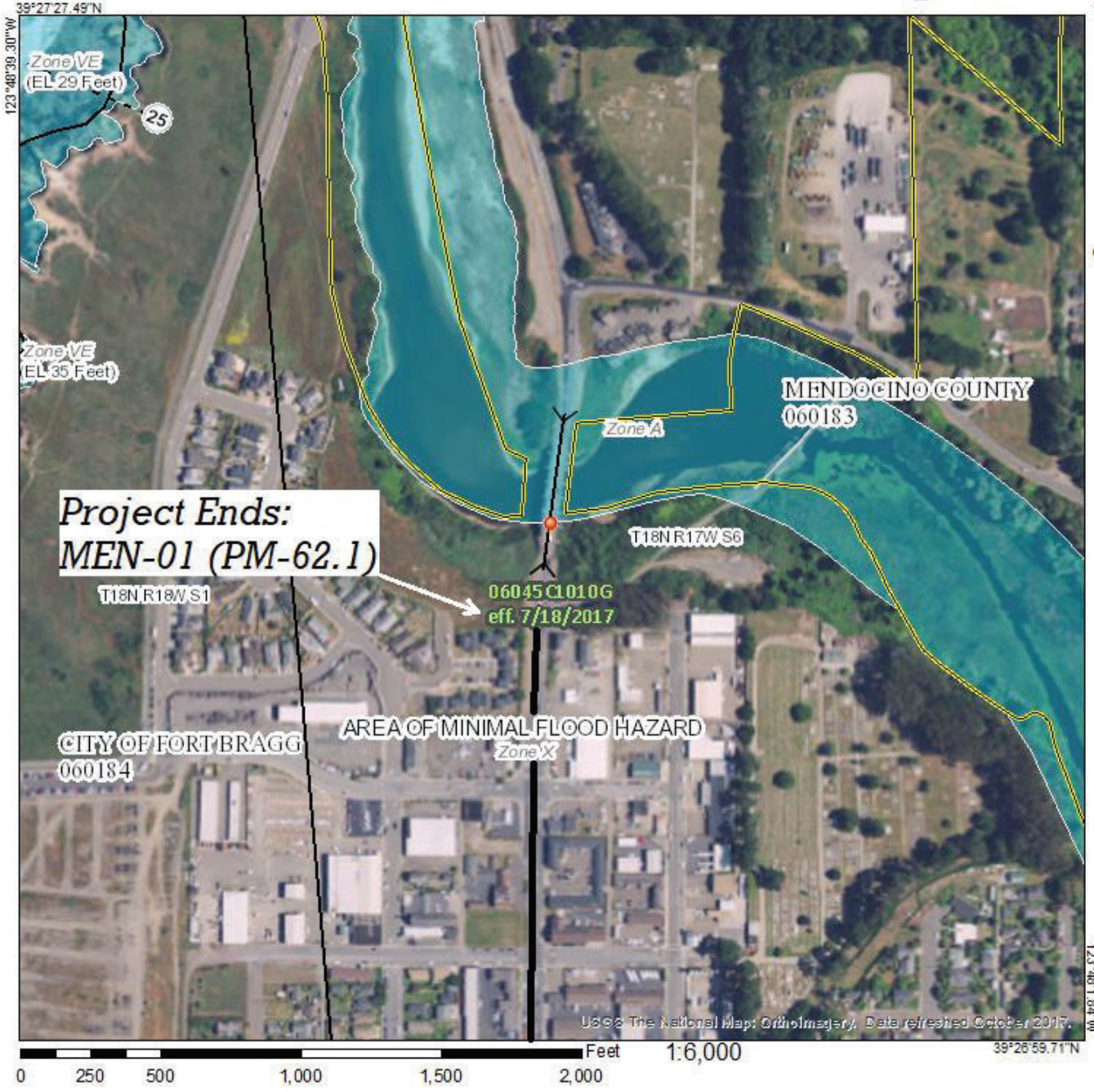
National Flood Hazard Layer FIRMette



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The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/24/2018 at 11:29:30 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

ATTACHMENT 2

GUTTER SPREAD CALCULATION

Basin Flow Calculations							
	Basin	T_C (min)	Area (ac)	C factor	Intensity (in/hr) (10-yrs)	Q (ft^3/s)	total Q for the segment
NB	PM59.80 to PM 59.91 (Onsite)	5	0.75	0.95	4.06	2.8928	5.7185
NB	PM59.80 to PM 59.91 (Offsite)	5	1.16	0.6	4.06	2.8258	
NB	PM59.91 to PM60.03 (Onsite)	5	0.57	0.95	4.06	2.1985	2.7101
NB	PM59.91 to PM60.03 (Offsite)	5	0.21	0.6	4.06	0.5116	
SB	PM60.05 to PM60.17 (Onsite)	5	0.55	0.95	4.06	2.1214	2.1214
SB	PM61.20 to PM61.29 (Onsite)	5	0.81	0.95	4.06	3.1242	3.1242

Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Wednesday, Feb 13 2019

NB-PM59.80 to PM59.91-Type A Dike

Triangular

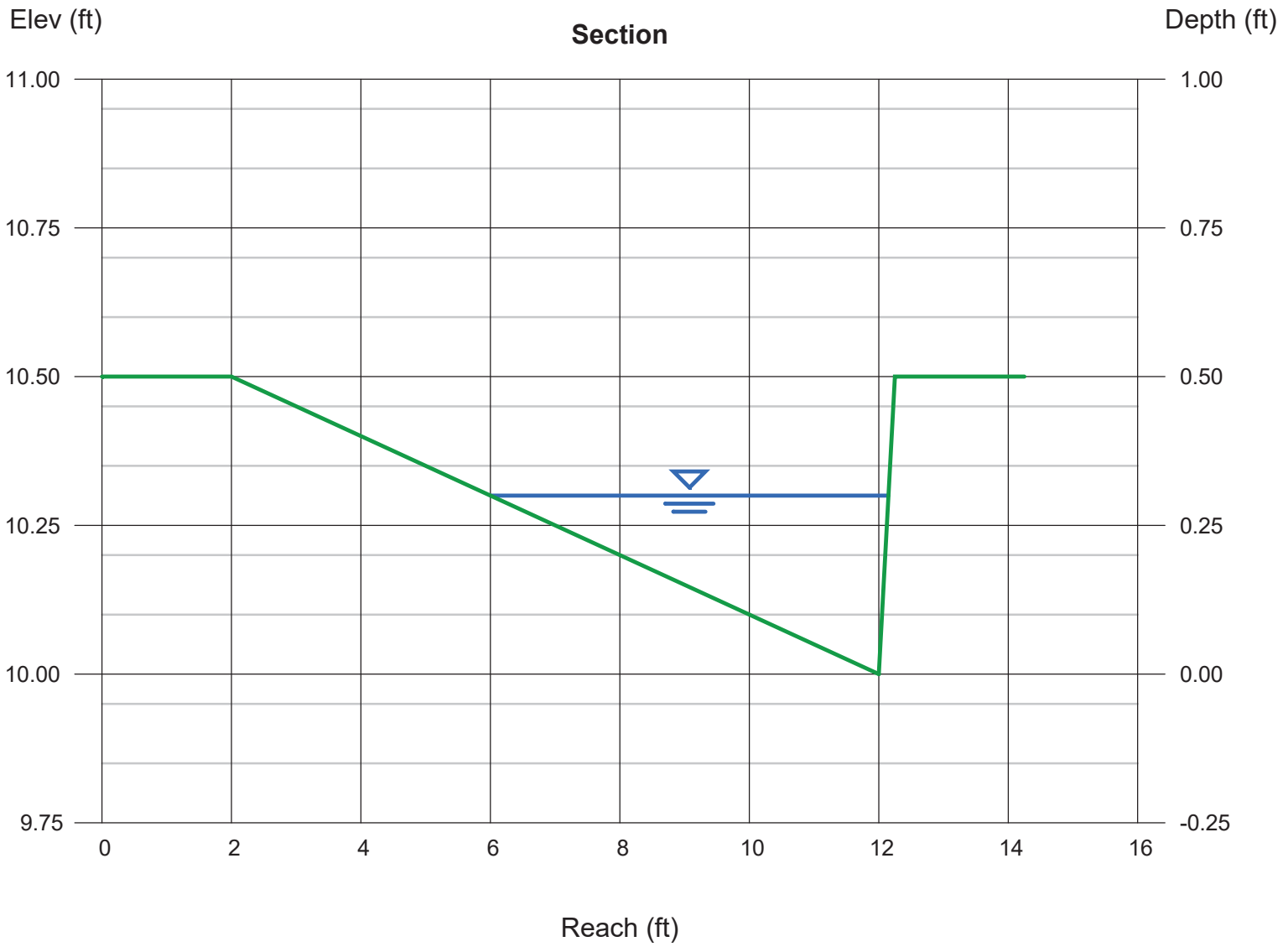
Side Slopes (z:1)	= 20.00, 0.50
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 10.00
Slope (%)	= 4.50
N-Value	= 0.014

Calculations

Compute by:	Known Q
Known Q (cfs)	= 5.72

Highlighted

Depth (ft)	= 0.30
Q (cfs)	= 5.720
Area (sqft)	= 0.92
Velocity (ft/s)	= 6.20
Wetted Perim (ft)	= 6.34
Crit Depth, Yc (ft)	= 0.46
Top Width (ft)	= 6.15
EGL (ft)	= 0.90



Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Wednesday, Feb 13 2019

NB-PM59.91 to PM60.03-Type A Dike

Triangular

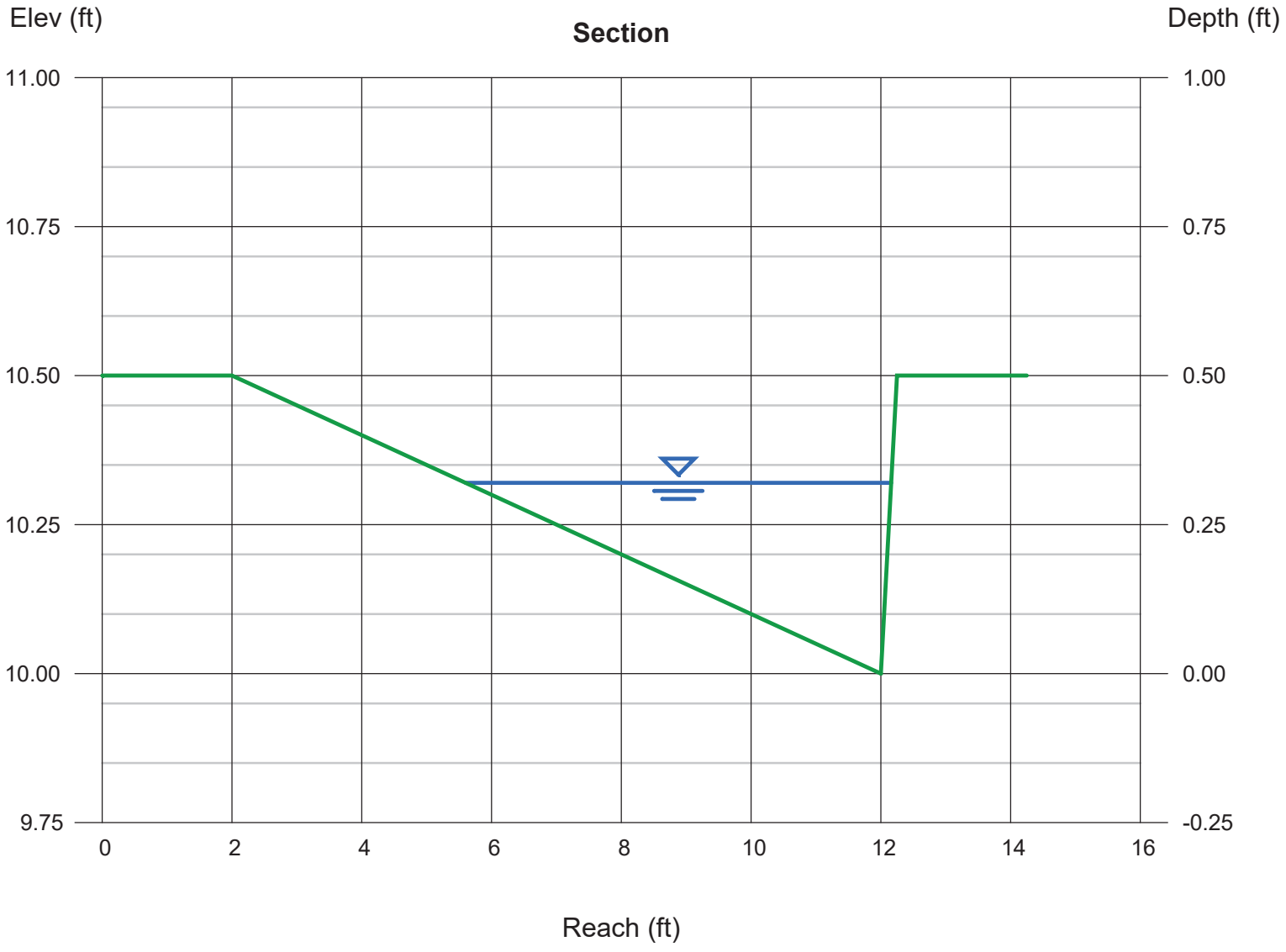
Side Slopes (z:1)	= 20.00, 0.50
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 10.00
Slope (%)	= 0.80
N-Value	= 0.014

Calculations

Compute by:	Known Q
Known Q (cfs)	= 2.71

Highlighted

Depth (ft)	= 0.32
Q (cfs)	= 2.710
Area (sqft)	= 1.05
Velocity (ft/s)	= 2.58
Wetted Perim (ft)	= 6.77
Crit Depth, Yc (ft)	= 0.34
Top Width (ft)	= 6.56
EGL (ft)	= 0.42



Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Wednesday, Feb 13 2019

SB-PM60.05 to PM60.17-Type A curb-Onsite

Triangular

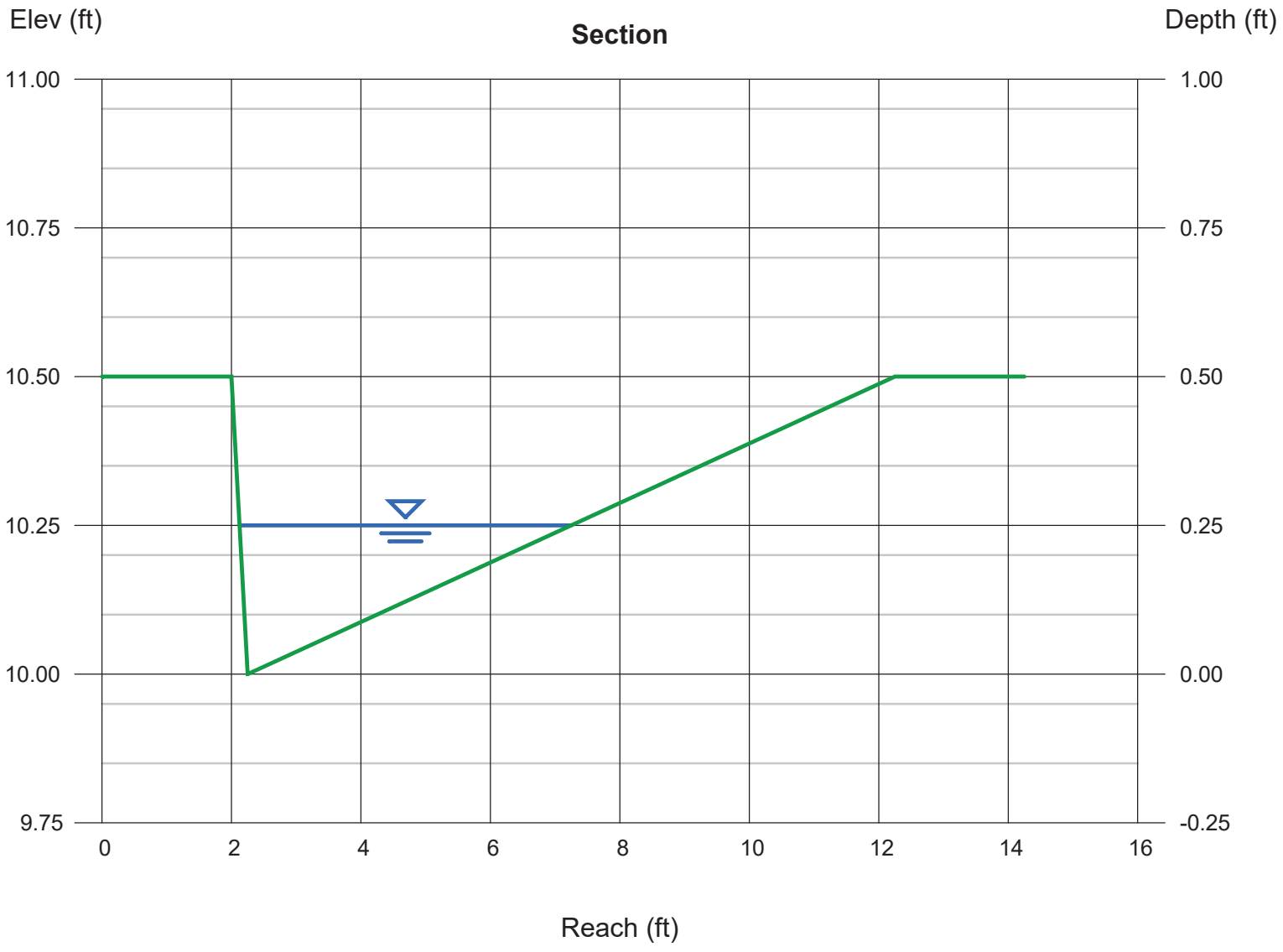
Side Slopes (z:1)	= 0.50, 20.00
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 10.00
Slope (%)	= 2.00
N-Value	= 0.014

Calculations

Compute by:	Known Q
Known Q (cfs)	= 2.12

Highlighted

Depth (ft)	= 0.25
Q (cfs)	= 2.120
Area (sqft)	= 0.64
Velocity (ft/s)	= 3.31
Wetted Perim (ft)	= 5.29
Crit Depth, Yc (ft)	= 0.31
Top Width (ft)	= 5.13
EGL (ft)	= 0.42



Channel Report

SB-PM61.20 to PM61.29-Type A curb

Triangular

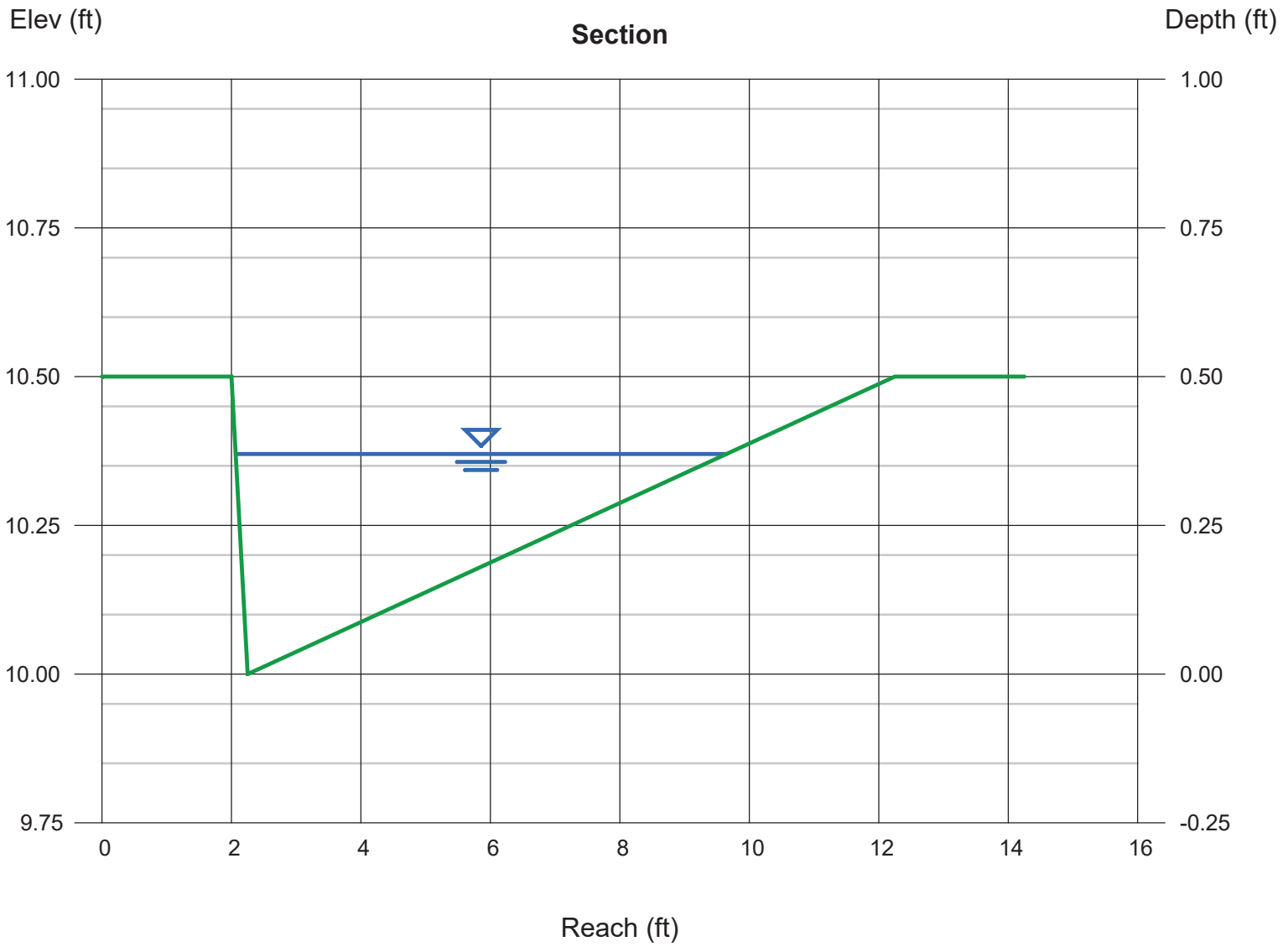
Side Slopes (z:1)	= 0.50, 20.00
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 10.00
Slope (%)	= 0.50
N-Value	= 0.014

Calculations

Compute by:	Known Q
Known Q (cfs)	= 3.13

Highlighted

Depth (ft)	= 0.37
Q (cfs)	= 3.130
Area (sqft)	= 1.40
Velocity (ft/s)	= 2.23
Wetted Perim (ft)	= 7.82
Crit Depth, Yc (ft)	= 0.36
Top Width (ft)	= 7.58
EGL (ft)	= 0.45



ATTACHMENT 3

DRAINAGE RECOMMENDATIONS ON DESIGN LAYOUT

INDEX OF PLANS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

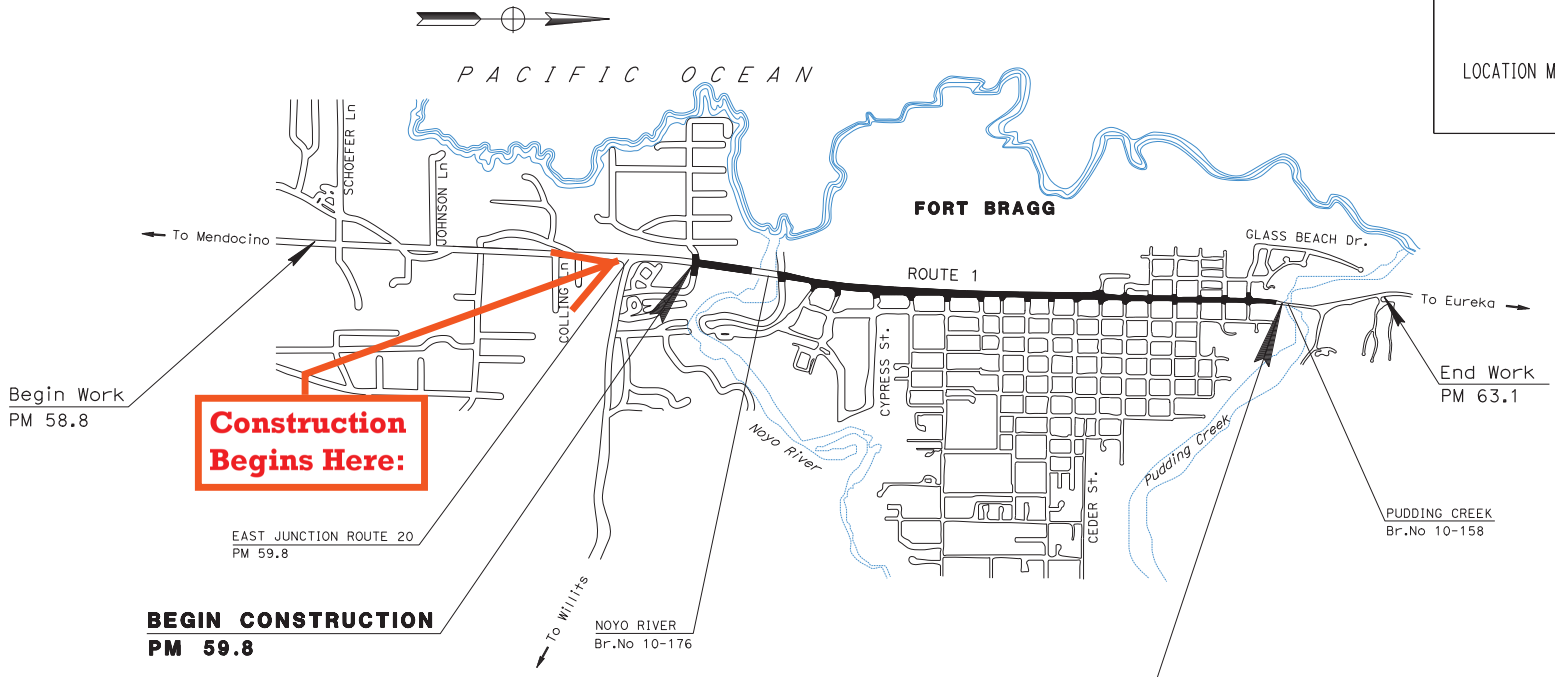
PROJECT PLANS FOR CONSTRUCTION ON
STATE HIGHWAY

IN MENDOCINO COUNTY
IN FORT BRAGG
FROM 0.1 MILES NORTH OF EAST JUNCTION ROUTE 20
TO PUDDING CREEK (BR#10-158)

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	MEN	01	59.8/62.1		

LOCATION MAP



PROJECT MANAGER: STEVEN BLAIR
DESIGN MANAGER: SUMANDEEP SUDINI

PROJECT ENGINEER — DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

CONTRACT No.	01-0B220
PROJECT ID	0112000110

LAST REVISION 00-00-00
DATE PLOTTED => 21-SEP-2018
TIME PLOTTED => 10:32

BORDER LAST REVISED 8/1/2016 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => s132285 | DGN FILE => 0112000110ab001.dgn | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

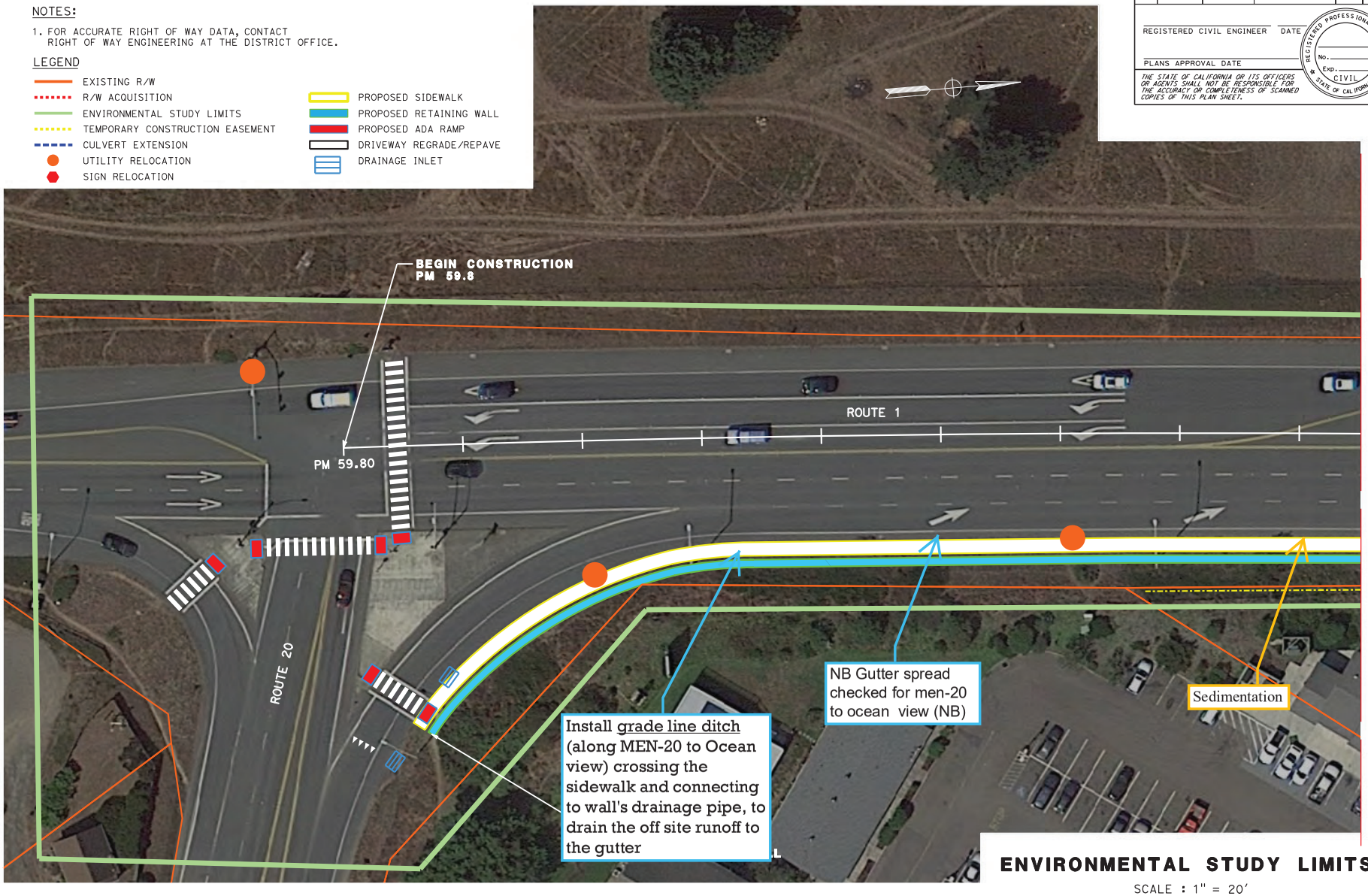
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

LEGEND

- EXISTING R/W
- R/W ACQUISITION
- ENVIRONMENTAL STUDY LIMITS
- TEMPORARY CONSTRUCTION EASEMENT
- CULVERT EXTENSION
- UTILITY RELOCATION
- SIGN RELOCATION
- PROPOSED SIDEWALK
- PROPOSED RETAINING WALL
- PROPOSED ADA RAMP
- DRIVEWAY REGRADE/REPAVE
- DRAINAGE INLET



ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR: DERECK GOODWIN

CALCULATED-DESIGNED BY: SUMANDEEP SUDINI
CHECKED BY: RICHARD LY-LEE

REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 09-OCT-2018
TIME PLOTTED => 15:55

BORDER LAST REVISED 7/2/2010

USERNAME => s132285
DGN FILE => 0112000110esl001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0332

PROJECT NUMBER & PHASE 0112000110

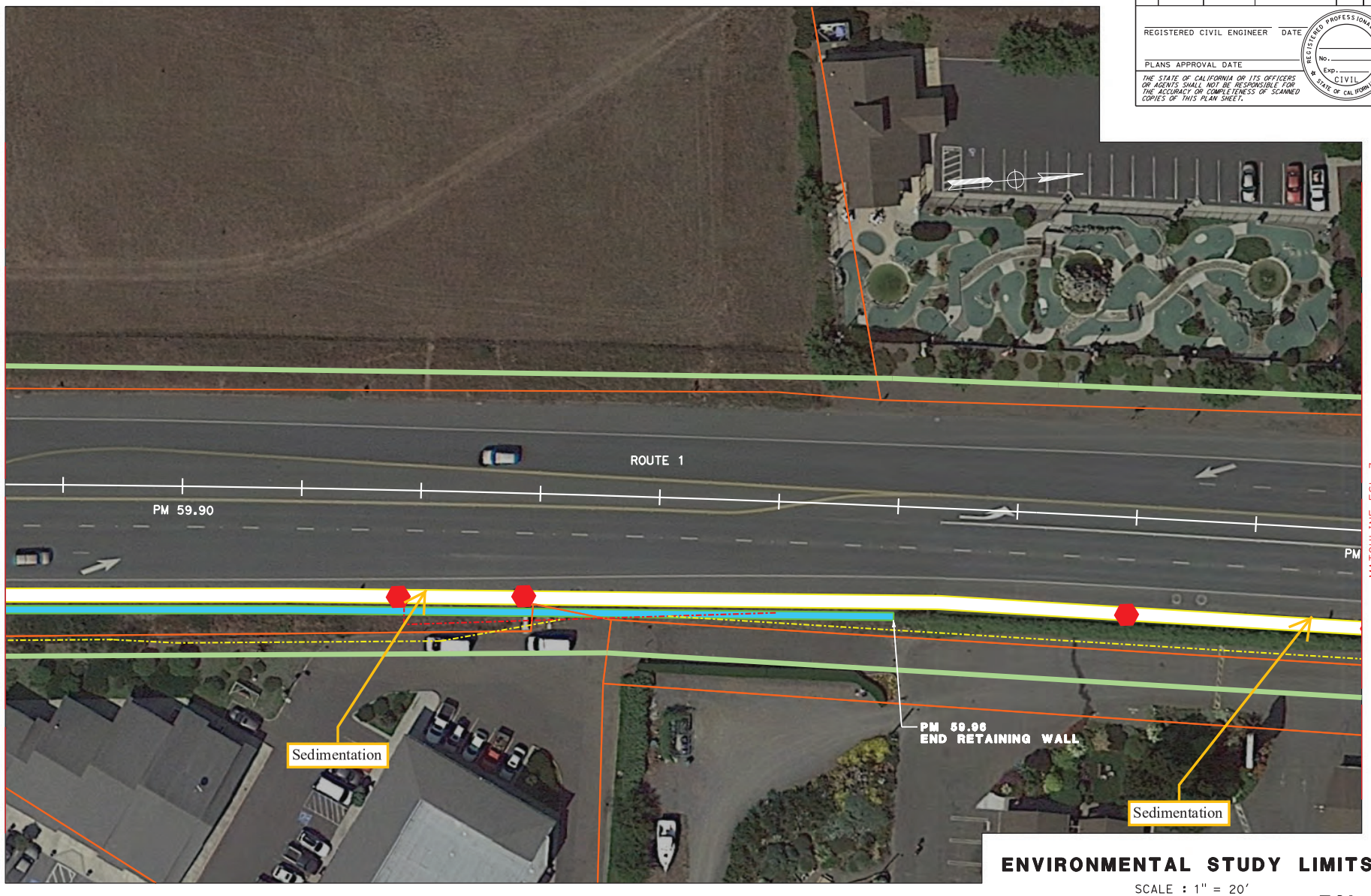
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	SUMANDEEP SUDINI	REVISED BY	
DERECK GOODWIN	CHECKED BY	RICHARD LY-LEE	DATE REVISED	

LAST REVISION DATE PLOTTED => 09-OCT-2018
09-18-18 TIME PLOTTED => 15:57

BORDER LAST REVISED 7/2/2010 | USERNAME => s132285 DGN FILE => 0112000110ea002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110

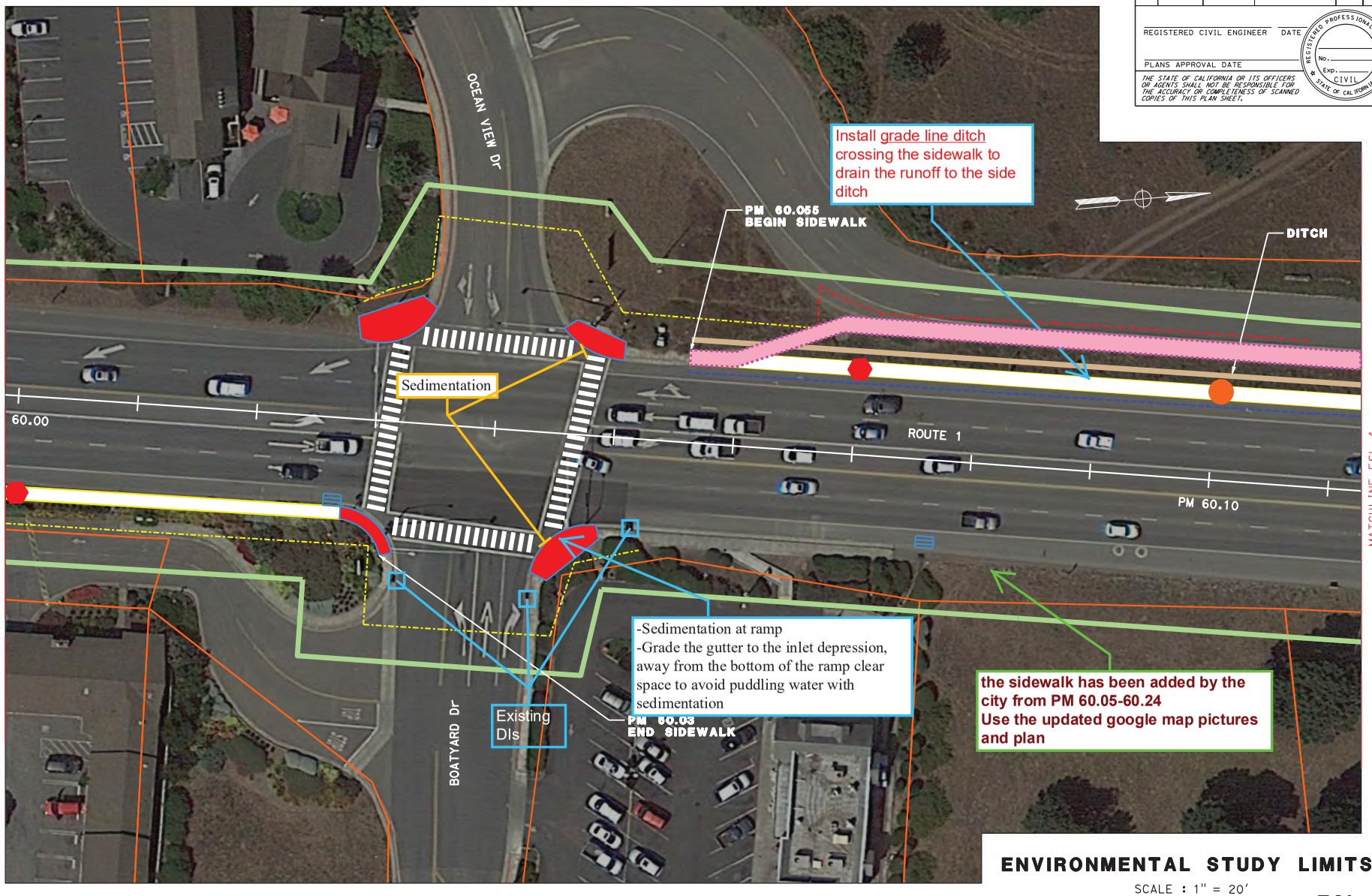
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — No. Exp. CIVIL — STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	SUMANDEEP SUDINI	REVISED BY
DERECK GOODWIN	CHECKED BY	RICHARD LY-LEE	DATE REVISED

LAST REVISION 09-18-18 | DATE PLOTTED => 09-OCT-2018 | TIME PLOTTED => 15:59

BORDER LAST REVISED 7/2/2010 | USERNAME => s132285 | DGN FILE => 0112000110ea003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110

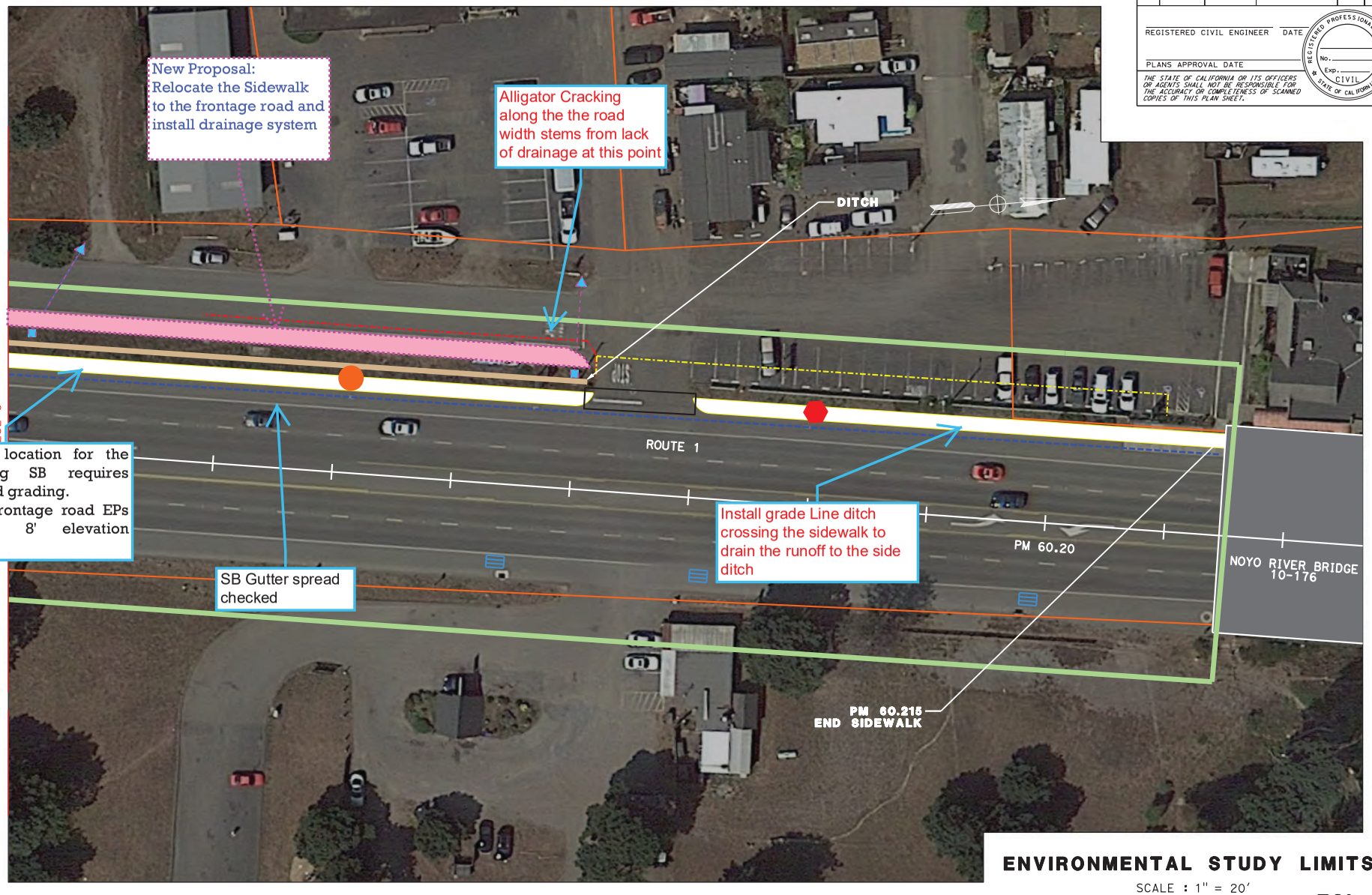
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

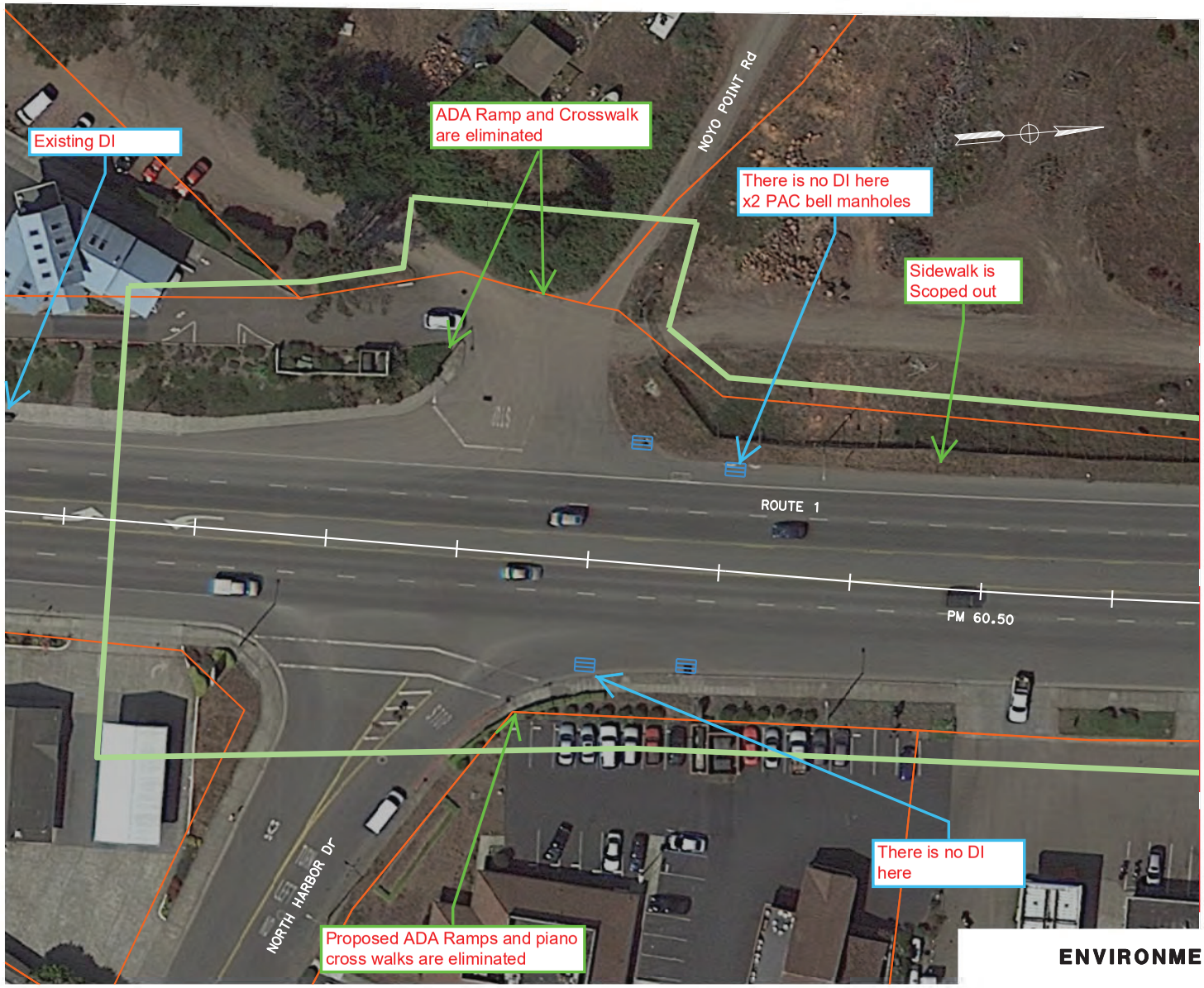
ESL-4

CALCULATED-DESIGNED BY SUMANDEEP SUDINI
CHECKED BY RICHARD LY-LEE
REVISED BY
DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
PROJECT DEVELOPMENT
FUNCT
D

LAST REVISION DATE PLOTTED => 09-OCT-2018
TIME PLOTTED => 16:00

BORDER LAST REVISED 7/2/2010 | USERNAME => s132285 DGN FILE => 0112000110ea004.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR: DERECK GOODWIN

CALCULATED-DESIGNED BY: SUMANDEEP SUDINI
CHECKED BY: RICHARD LY-LEE

REVISED BY | DATE REVISED

ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-5

LAST REVISION DATE PLOTTED => 09-OCT-2018
TIME PLOTTED => 16:02

BORDER LAST REVISED 7/2/2010

USERNAME => s132285
DGN FILE => 0112000110ea005.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0332

PROJECT NUMBER & PHASE 0112000110

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

ADA Ramp, Side walk & Cross walk are scoped out

MATCHLINE ESL-5

MATCHLINE ESL-7

ROUTE 1

PM 60.60

CURB EXTENSIONS

3 Existing DIs

-Relocate the DIs
-Grade the curb ramp gutter to the inlet depression, away from the bottom of the ramp clear space.
-Hydraulic review pending new design layout

ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR: DERECK GOODWIN

CALCULATED-DESIGNED BY: SUMANDEEP SUDINI
CHECKED BY: RICHARD LY-LEE

REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 09-OCT-2018
09-18-18 TIME PLOTTED => 16:03

BORDER LAST REVISED 7/2/2010

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0332

PROJECT NUMBER & PHASE 0112000110

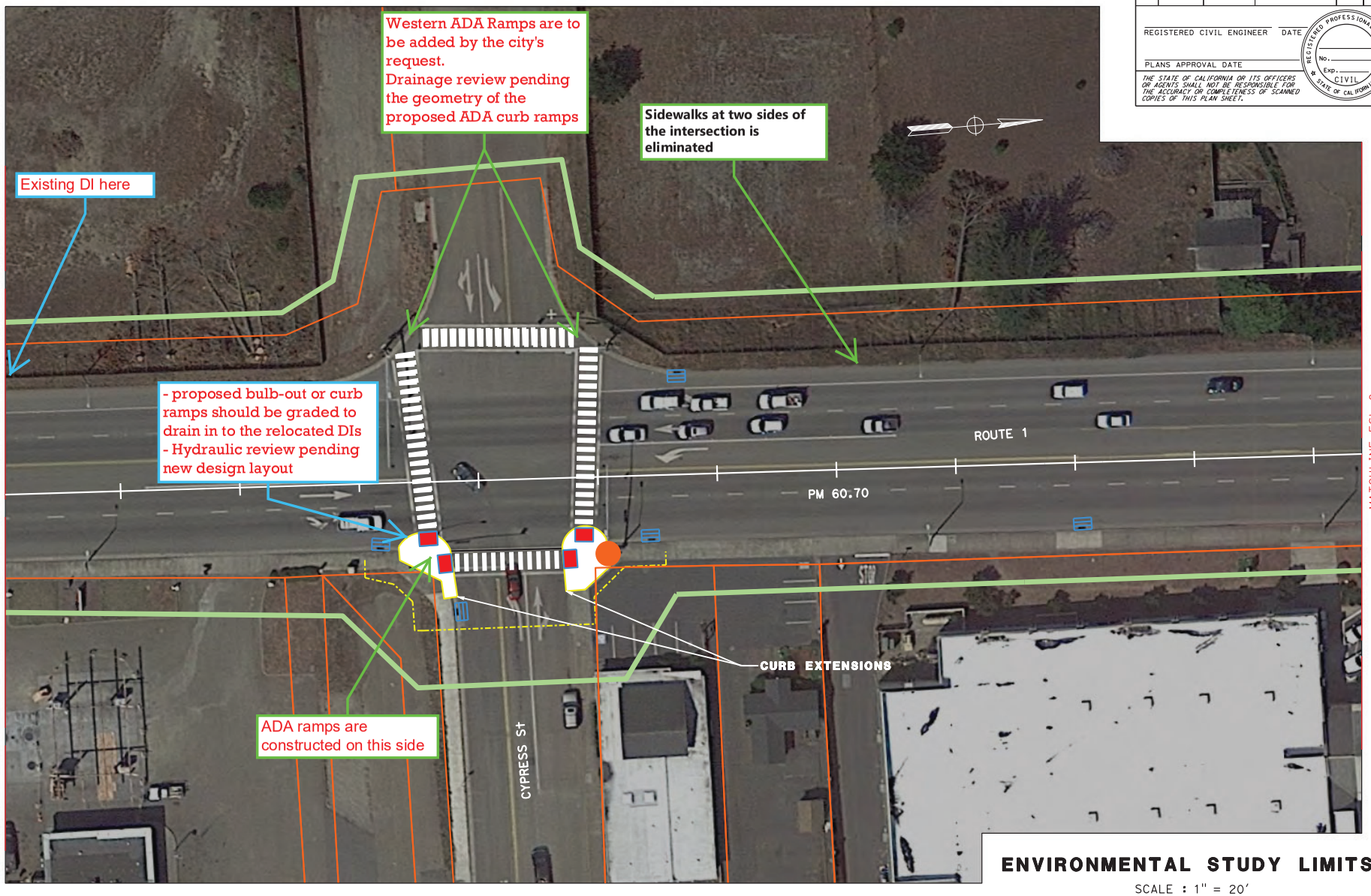
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	SUMANDEEP SUDINI	REVISED BY	
DERECK GOODWIN	CHECKED BY	RICHARD LY-LEE	DATE REVISED	

LAST REVISION 09-18-18 | DATE PLOTTED => 09-OCT-2018 | TIME PLOTTED => 16:05

BORDER LAST REVISED 7/2/2010 | USERNAME => s132285 | DGN FILE => 0112000110ea007.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110

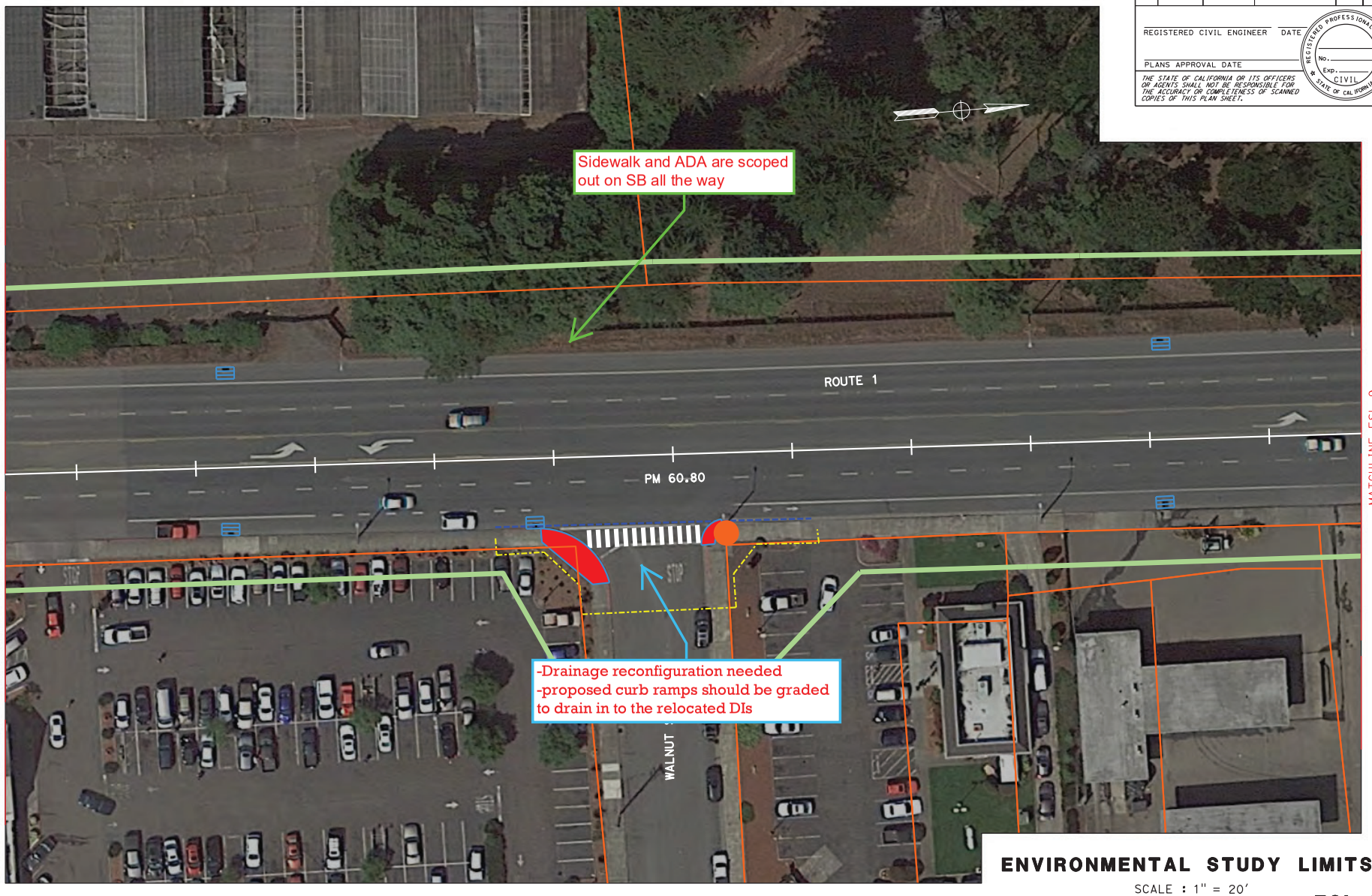
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	SUMANDEEP SUDINI	REVISED BY
DERECK GOODWIN	CHECKED BY	RICHARD LY-LEE	DATE REVISED

LAST REVISION DATE PLOTTED => 10-OCT-2018
09-18-18 TIME PLOTTED => 08:38

BORDER LAST REVISED 7/2/2010 | USERNAME => s132285 DGN FILE => 0112000110esa008.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110

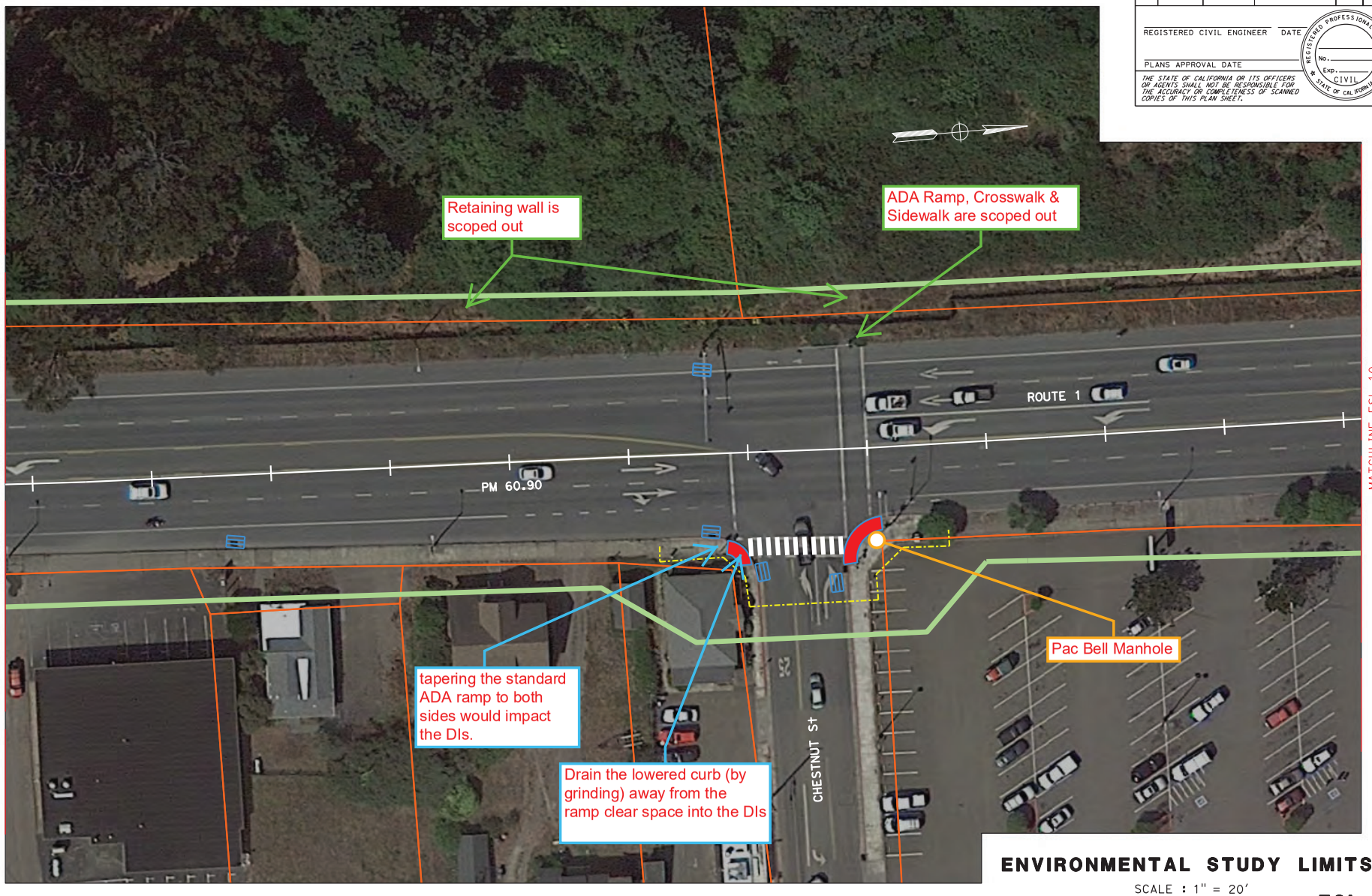
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

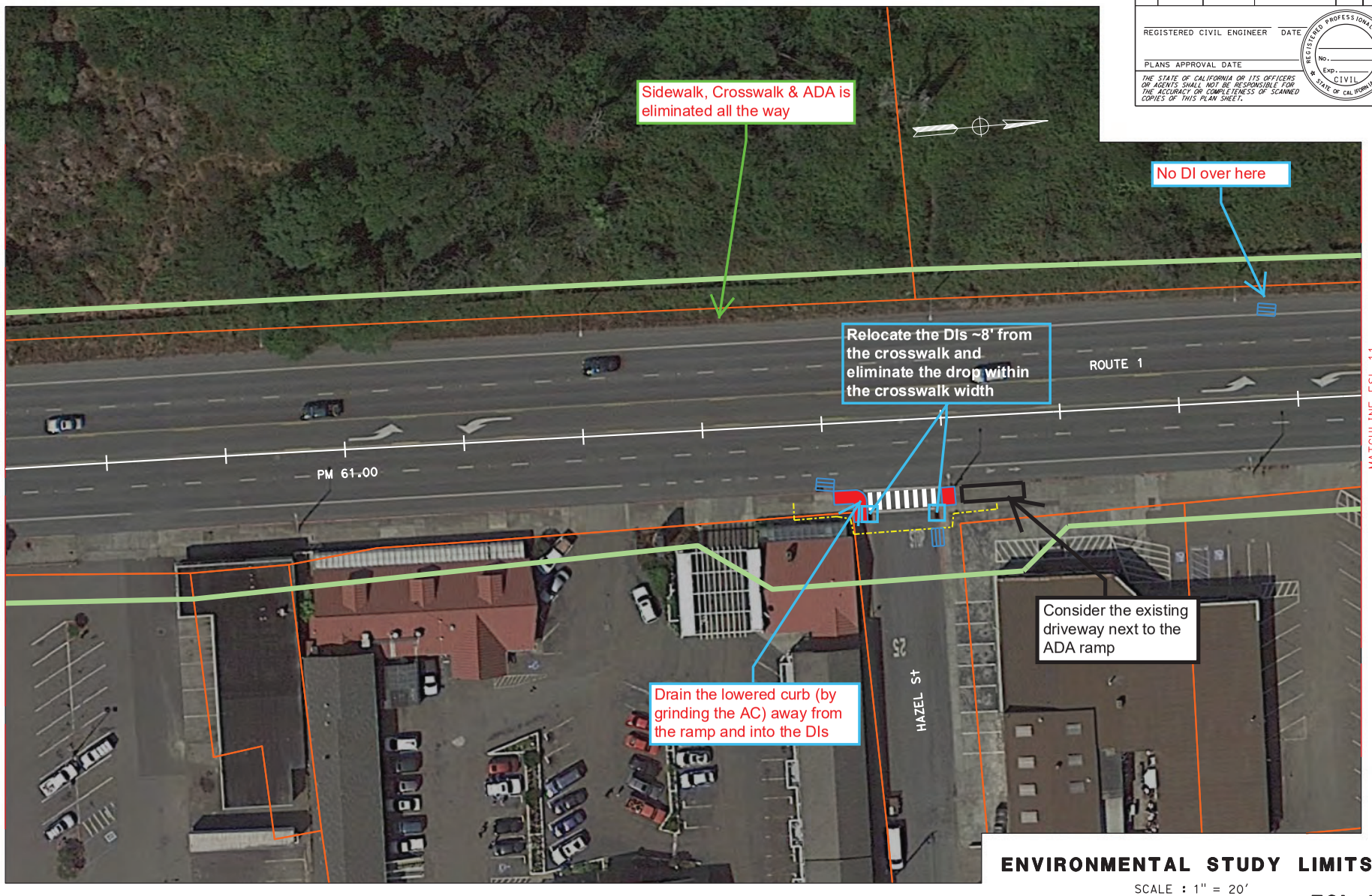
SCALE : 1" = 20'

ESL-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	SUMANDEEP SUDINI	REVISED BY	
Caltrans NORTH REGION PROJECT DEVELOPMENT	DERECK GOODWIN	CHECKED BY	RICHARD LY-LEE	DATE REVISED	

LAST REVISION 09-18-18 | DATE PLOTTED => 10-OCT-2018 | TIME PLOTTED => 08:39

BORDER LAST REVISED 7/2/2010 | USERNAME => s132285 | DGN FILE => 0112000110ea009.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR: DERECK GOODWIN

CALCULATED-DESIGNED BY: SUMANDEEP SUDINI

CHECKED BY: RICHARD LY-LEE

REVISED BY

DATE REVISED

ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-10

LAST REVISION 09-18-18 | DATE PLOTTED => 10-OCT-2018 | TIME PLOTTED => 09:02

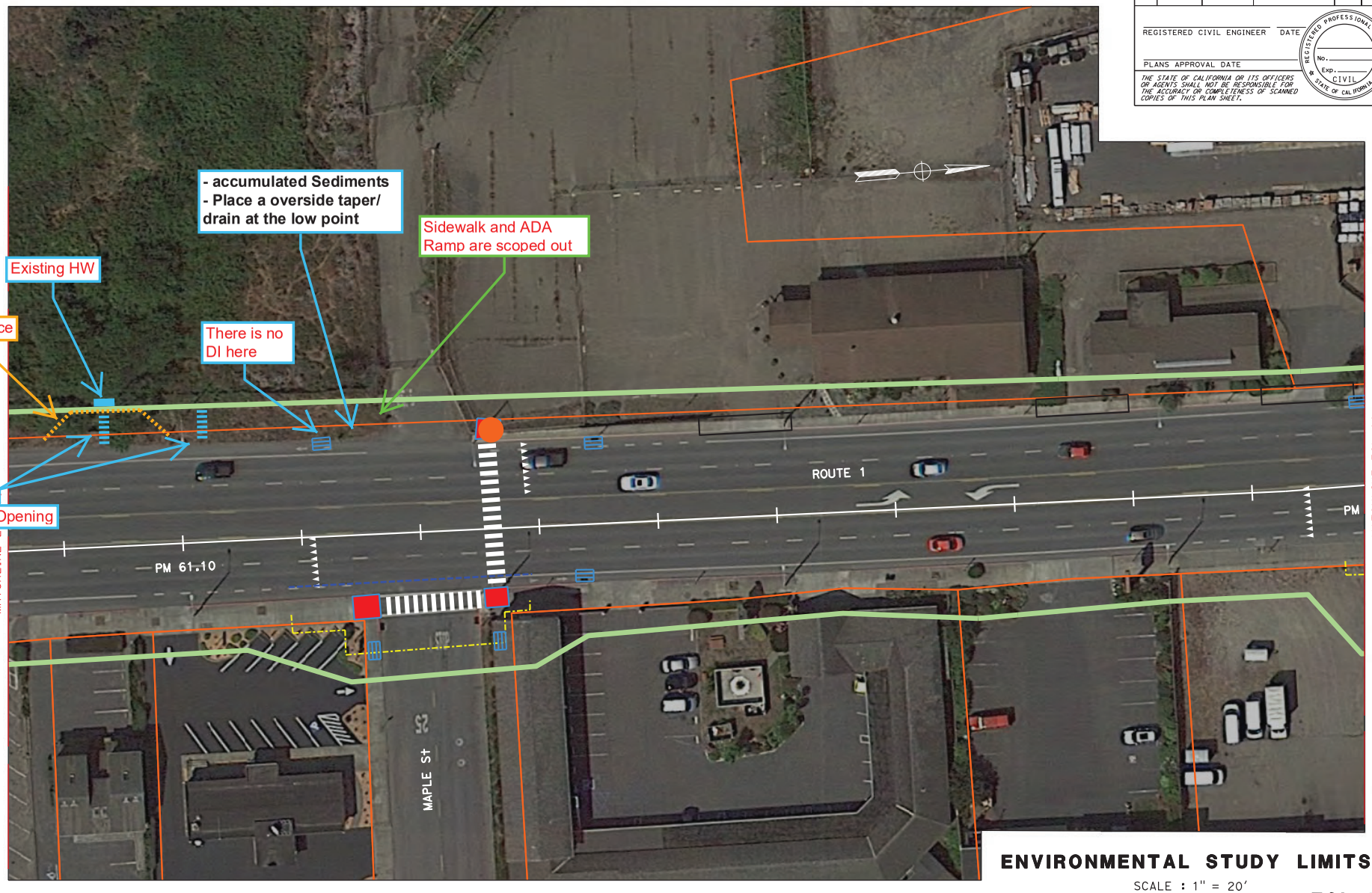
BORDER LAST REVISED 7/2/2010

USERNAME => s132285
DGN FILE => 0112000110ea010.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0332

PROJECT NUMBER & PHASE 0112000110



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR: DERECK WIN

CALCULATED-DESIGNED BY: SUMANDEEP SUDINI

CHECKED BY: RICHARD LY-LEE

REVISED BY

DATE REVISED

ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-11

LAST REVISION 09-18-18 | DATE PLOTTED => 10-OCT-2018 | TIME PLOTTED => 09:06

BORDER LAST REVISED 7/2/2010

USERNAME => s132285
DGN FILE => 0112000110ea011.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0332

PROJECT NUMBER & PHASE 0112000110

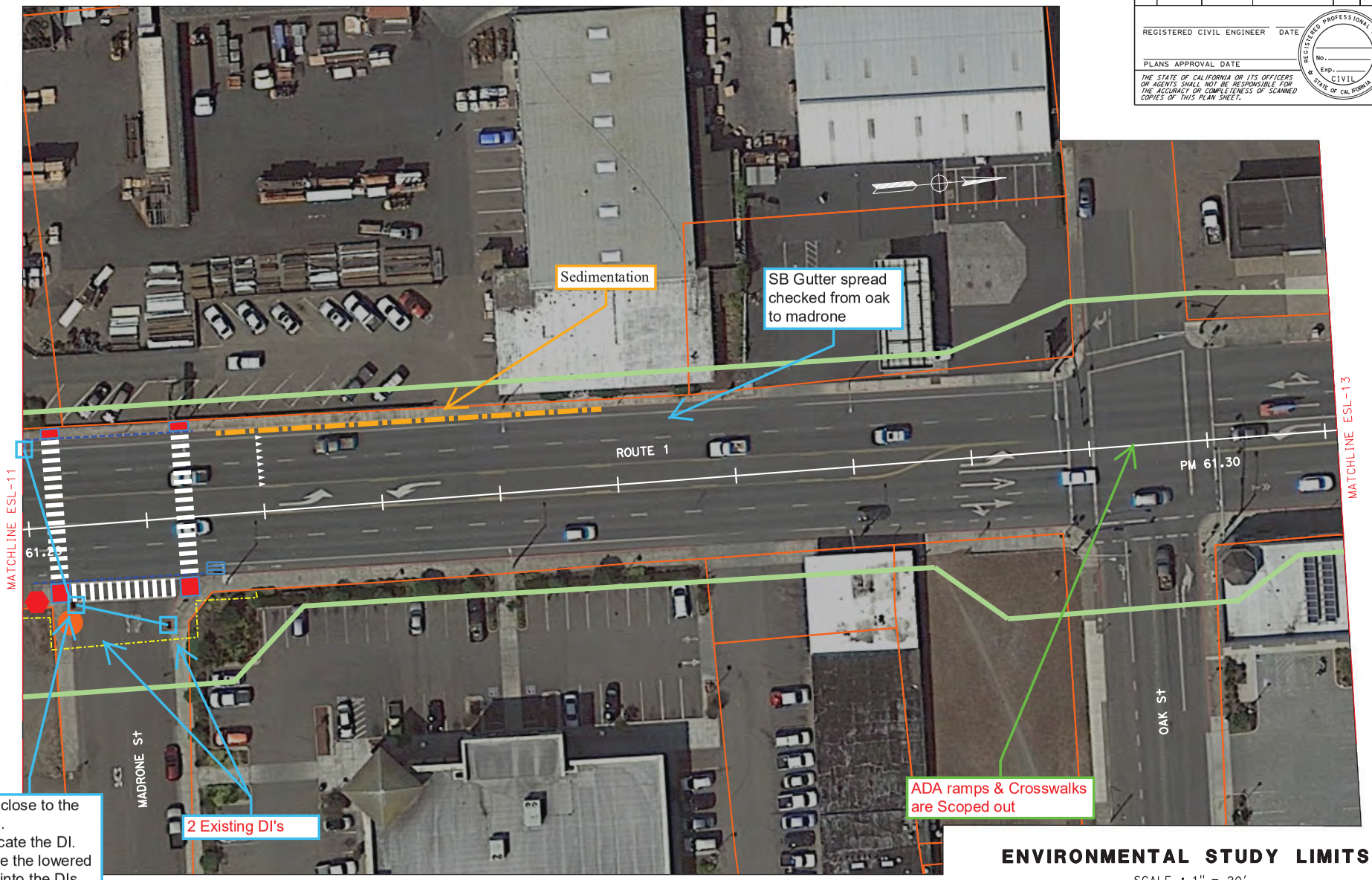
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA



STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY	DATE REVISED
DERECK GOODWIN	SUMANDEEP SUDINI		
	RICHARD LY-LEE		
	CHECKED BY		

ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-12

LAST REVISION 09-18-18 | DATE PLOTTED => 10-OCT-2018 | TIME PLOTTED => 09:10

BORDER LAST REVISED 7/2/2010 | USERNAME => s132285 | DGN FILE => 0112000110ea012.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-13

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	REVISED BY
DERECK GOODWIN	SUMANDEEP SUDINI	
	RICHARD LY-LEE	
	CHECKED BY	DATE REVISED

LAST REVISION DATE PLOTTED => 10-OCT-2018
09-18-18 TIME PLOTTED => 09:15

BORDER LAST REVISED 7/2/2010

USERNAME => s132285
DGN FILE => 0112000110ea013.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0332

PROJECT NUMBER & PHASE 0112000110

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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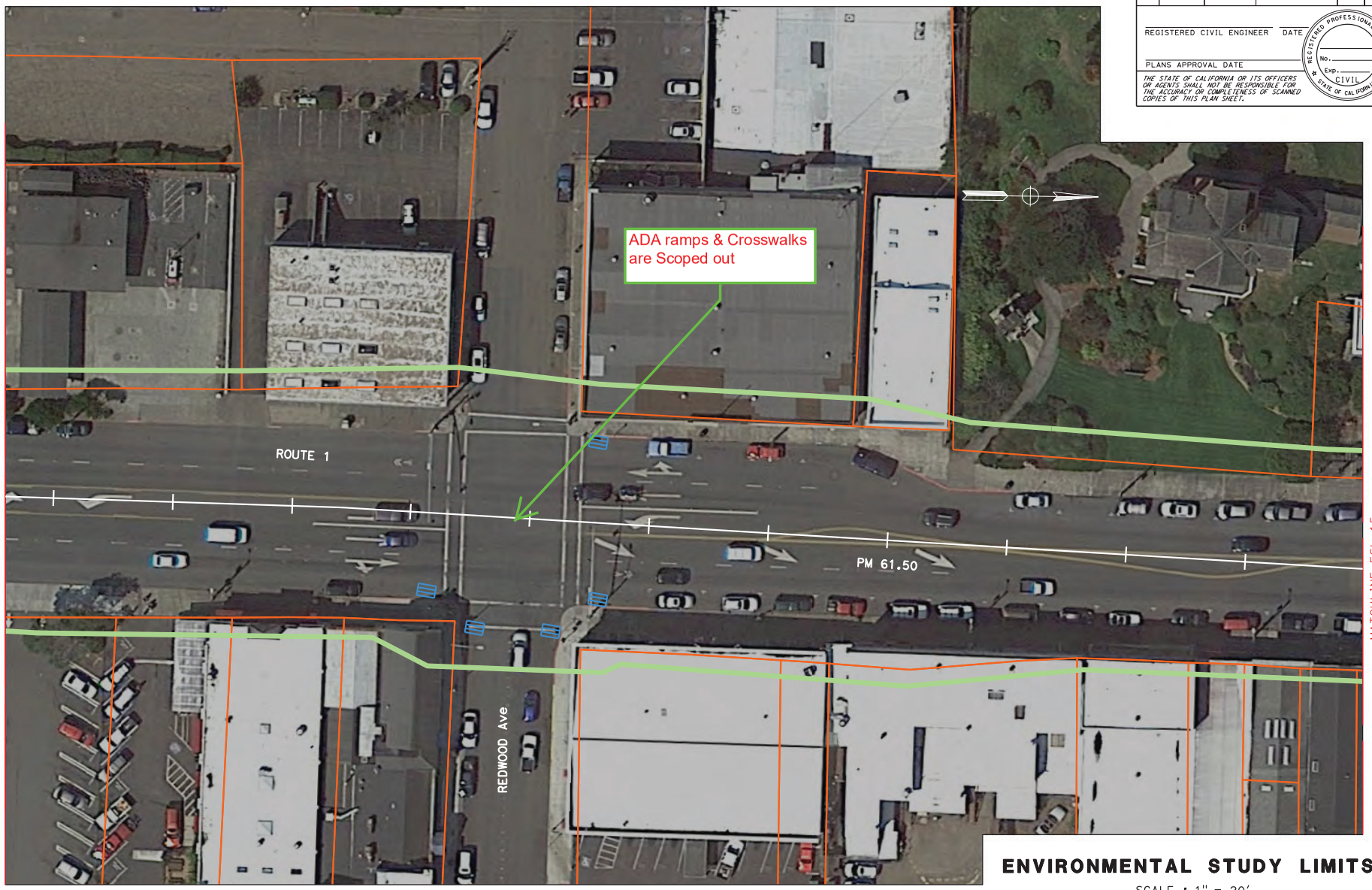


ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans NORTH REGION PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	SUMANDEEP SUDINI	REVISED BY	
DERECK GOODWIN	CHECKED BY	RICHARD LY-LEE	DATE REVISED	

LAST REVISION DATE PLOTTED => 10-OCT-2018
09-18-18 TIME PLOTTED => 09:16

BORDER LAST REVISED 7/2/2010 | USERNAME => s132285 DGN FILE => 0112000110eo014.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110

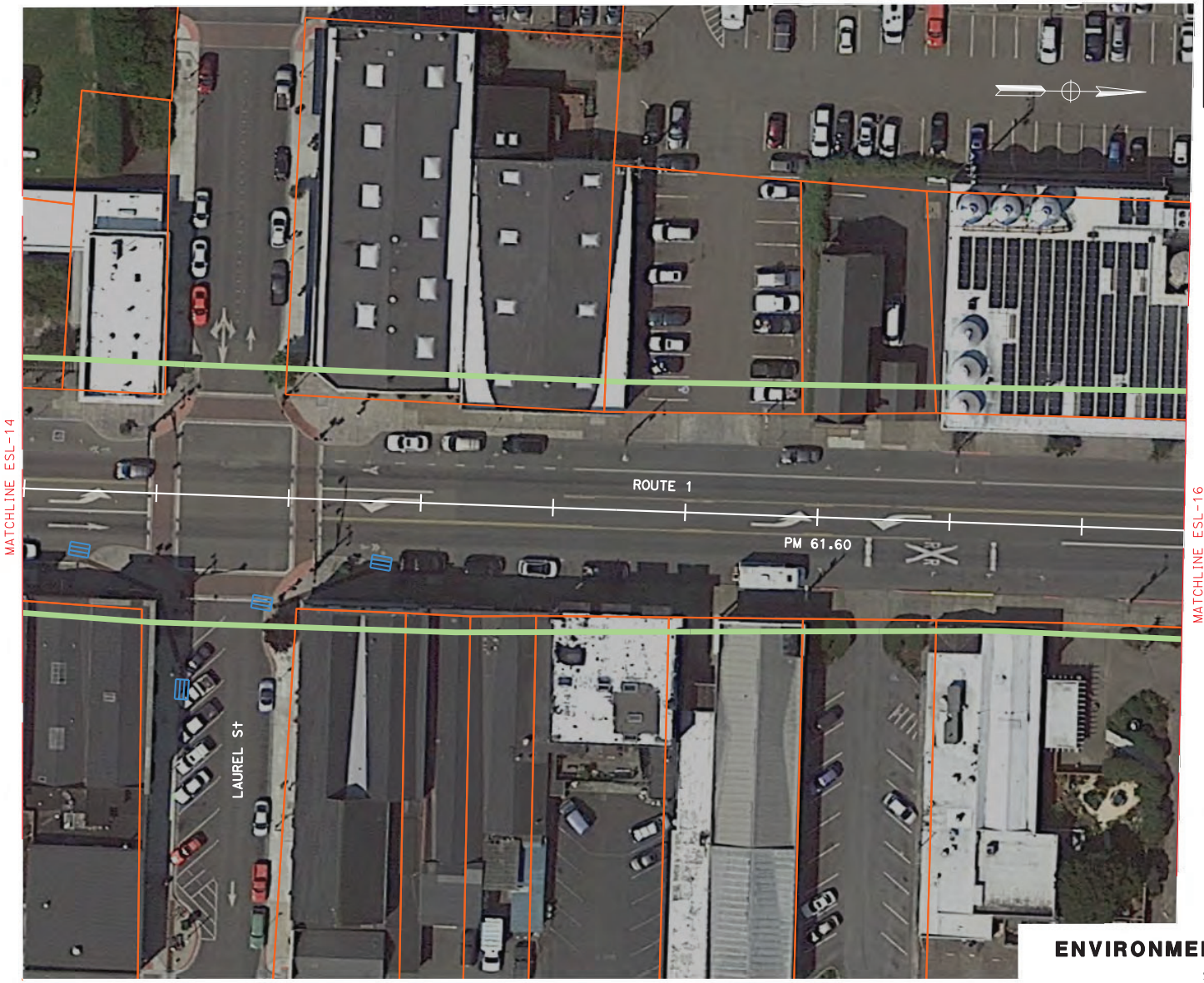
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ENVIRONMENTAL STUDY LIMITS

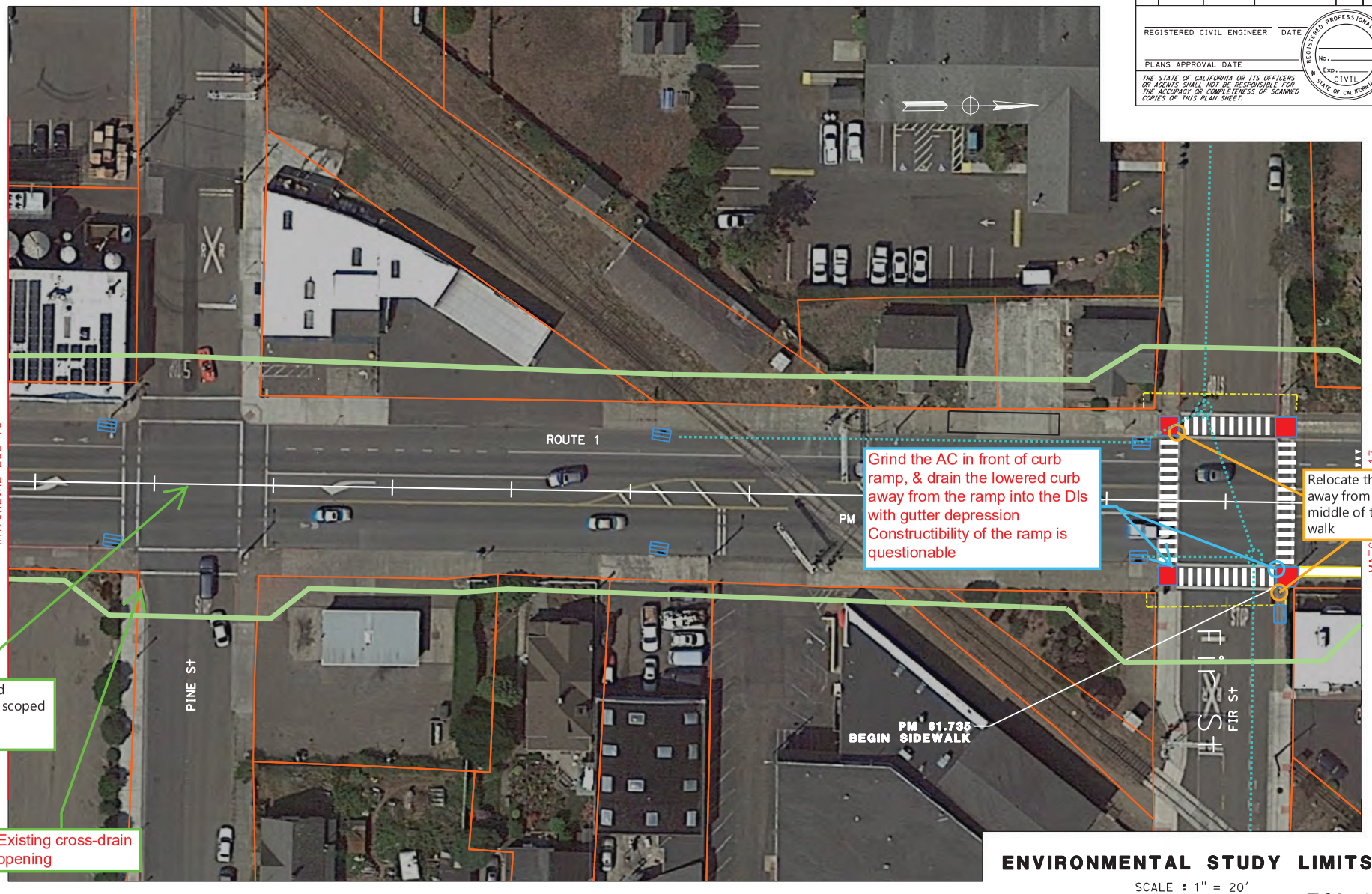
SCALE : 1" = 20'

ESL-15

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	SUMANDEEP SUDINI	REVISED BY	
Caltrans NORTH REGION PROJECT DEVELOPMENT	DERECK GOODWIN	CHECKED BY	RICHARD LY-LEE	DATE REVISED	

LAST REVISION DATE PLOTTED => 10-OCT-2018
TIME PLOTTED => 09:19
09-18-18

BORDER LAST REVISED 7/2/2010	USERNAME => s132285 DGN FILE => 0112000110ea015.dgn	RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3	UNIT 0332	PROJECT NUMBER & PHASE	0112000110



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
Caltrans PROJECT DEVELOPMENT	DERECK GOODWIN	SUMANDEEP SUDINI	RICHARD LY-LEE		

ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-16

LAST REVISION 09-18-18 | DATE PLOTTED => 10-OCT-2018 | TIME PLOTTED => 09:22

BORDER LAST REVISED 7/2/2010 | USERNAME => s132285 | DGN FILE => 0112000110ea016.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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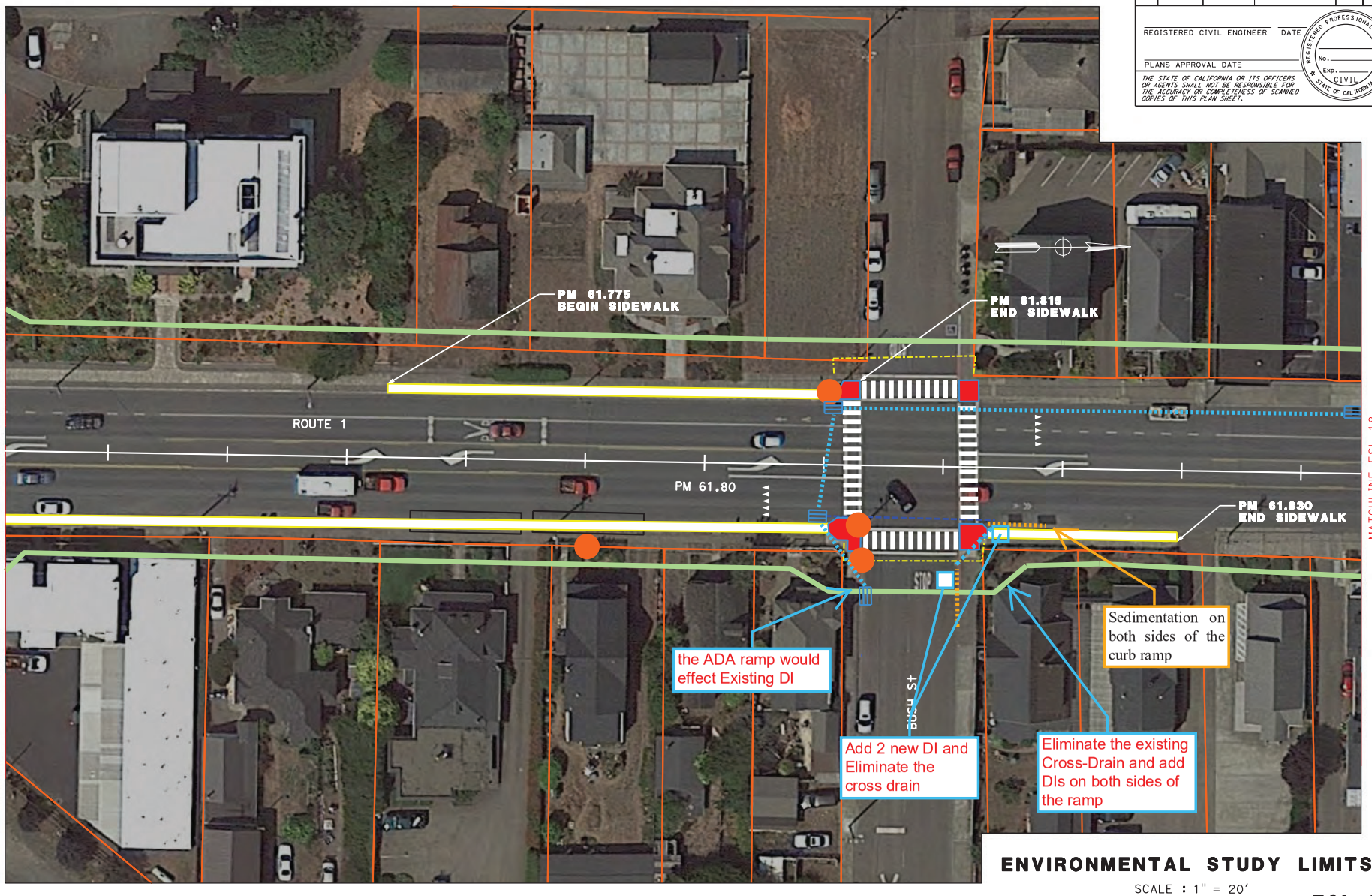
REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA



ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

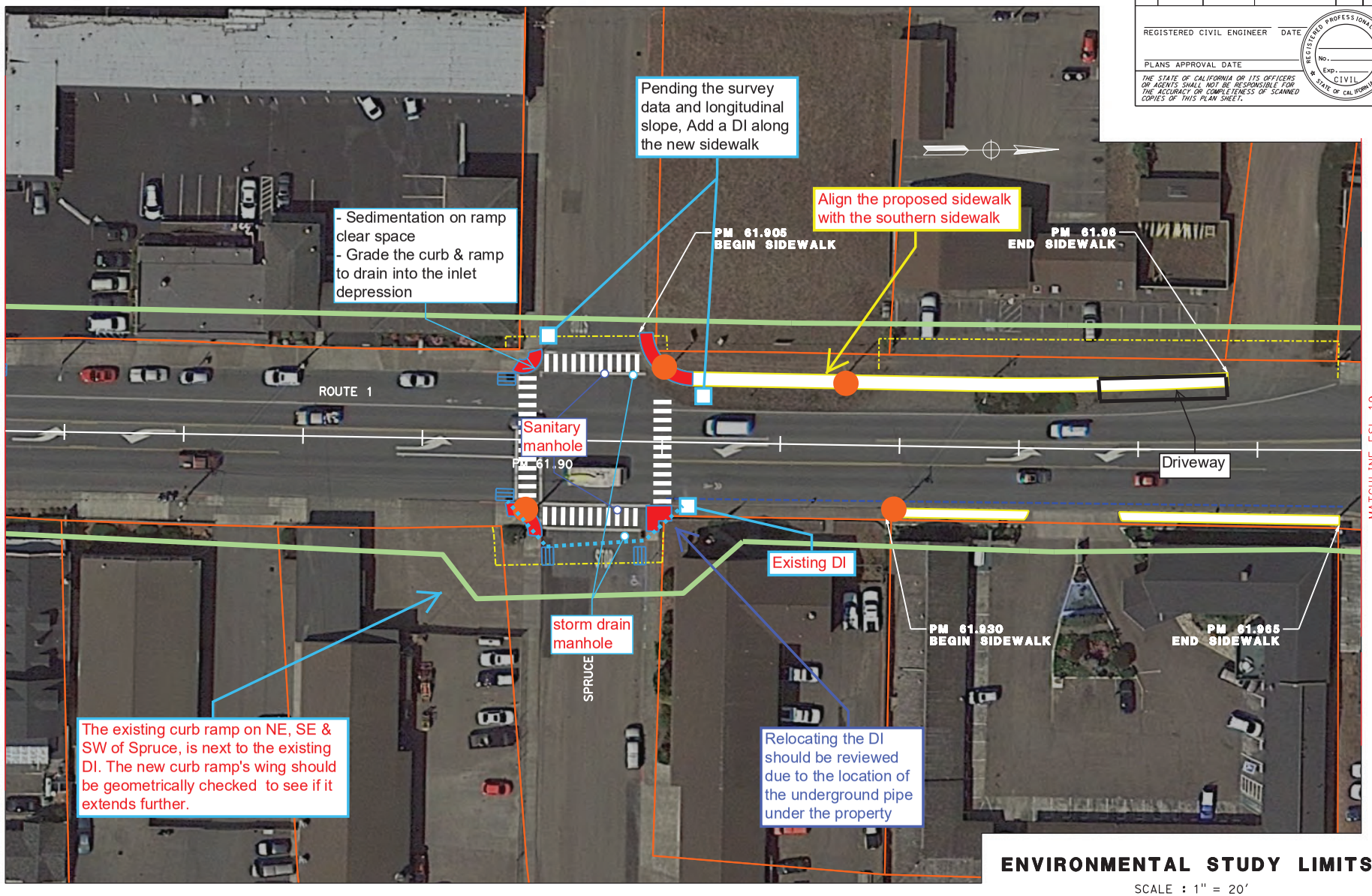
ESL-17

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR	CALCULATED-DESIGNED BY	SUMANDEEP SUDINI	REVISED BY	
DERECK GOODWIN	CHECKED BY	RICHARD LY-LEE	DATE REVISED	

LAST REVISION 09-18-18 | DATE PLOTTED => 10-OCT-2018 | TIME PLOTTED => 09:25

BORDER LAST REVISED 7/2/2010 | USERNAME => s132285 | DGN FILE => 0112000110esl017.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

REVISED BY	DATE REVISED
SUMANDEEP SUDINI	RICHARD LY-LEE

CALCULATED-DESIGNED BY	CHECKED BY

FUNCTIONAL SUPERVISOR: DERECK GOODWIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
PROJECT DEVELOPMENT

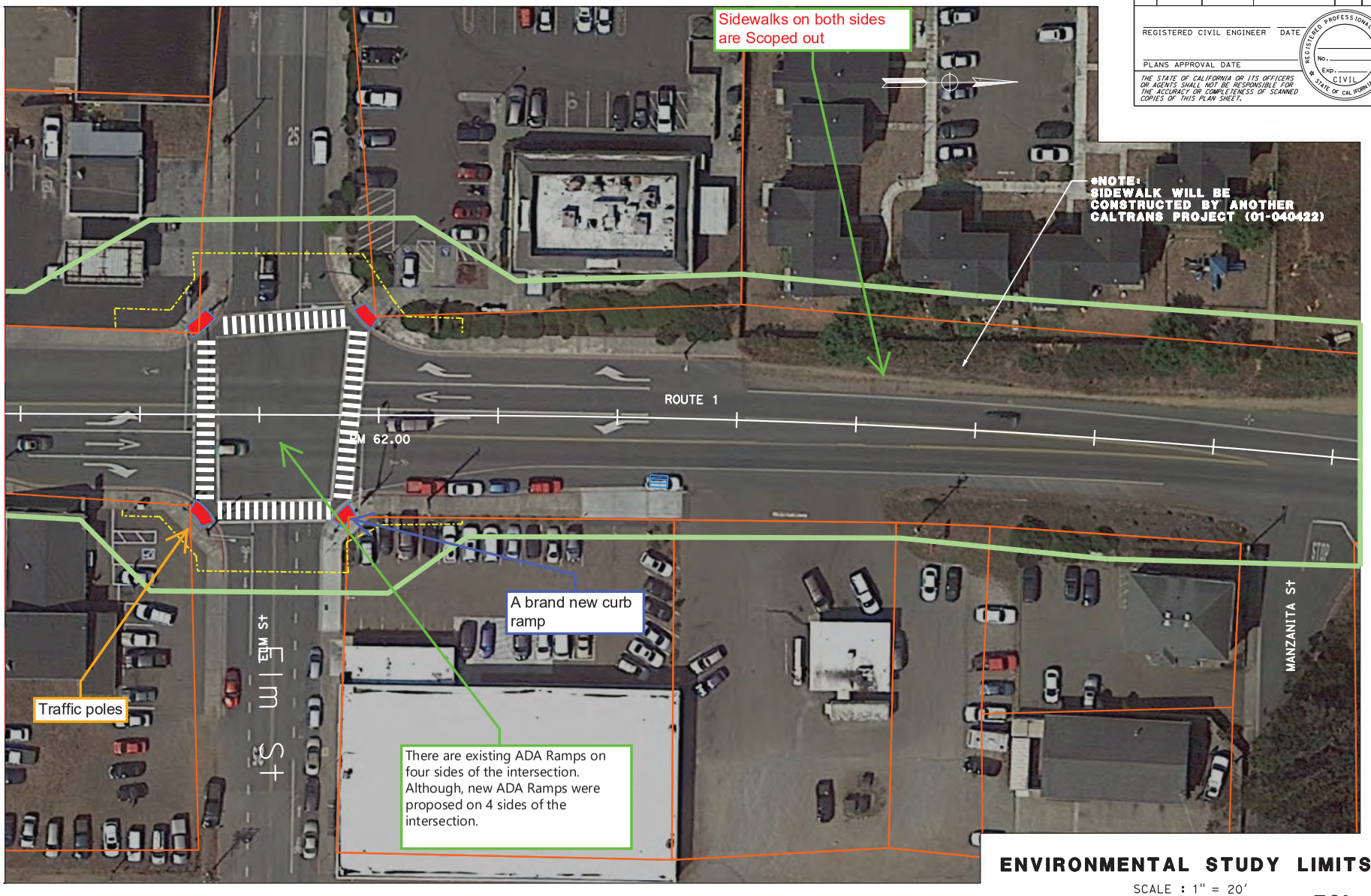
ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-18

LAST REVISION 09-18-18 | DATE PLOTTED => 10-OCT-2018 | TIME PLOTTED => 09:29

BORDER LAST REVISED 7/2/2010 | USERNAME => s132285 | DGN FILE => 0112000110ea018.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 0332 | PROJECT NUMBER & PHASE 0112000110



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
01	Men	1	59.8/62.1		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
NORTH REGION
PROJECT DEVELOPMENT

FUNCTIONAL SUPERVISOR: DERECK GOODWIN

CALCULATED-DESIGNED BY: SUMANDEEP SUDINI
CHECKED BY: RICHARD LY-LEE

REVISED BY
DATE REVISED

ENVIRONMENTAL STUDY LIMITS

SCALE : 1" = 20'

ESL-19

LAST REVISION DATE PLOTTED => 10-OCT-2018
09-18-18 TIME PLOTTED => 09:31

BORDER LAST REVISED 7/2/2010

USERNAME => s132285
DGN FILE => 0112000110esl019.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 0332

PROJECT NUMBER & PHASE 0112000110