

**Meeting of the Central Valley Flood Protection Board
February 22, 2013**

Staff Report – Encroachment Permit

**Southern California Edison
Removal and Replacement of High Voltage Towers
Tulare County**

1.0 – ITEM

Consider approval of Permit No. 18812 and Resolution No. 2013-03 (Attachments B&C)

2.0 – APPLICANT

Southern California Edison

3.0 – LOCATION

The Southern California Edison (SCE) Big Creek Rebuild Project follows County Road 148 and Ketchum Ditch Road in a north-south direction for 11.2-miles beginning at the SCE Reactor Substation southeast of Visalia and terminates approximately 500-feet south of Cottonwood Creek.

(St. Johns and Cottonwood Creek Designated Floodways, Tulare County, see Attachment A)

4.0 – DESCRIPTION

The applicant proposes to remove 24 existing steel lattice towers from inside the St. Johns Designated Floodway and replace with six (6) tubular steel poles; To remove 12 steel lattice towers from inside of the Cottonwood Creek Designated Floodway and replace with two (2) tubular steel poles and three (3) steel lattice towers.

5.0 – PROJECT ANALYSIS

The proposed project, the Big Creek 1-Rector and Big Creek 3-Rector Rebuild Project (Big Creek Rebuild) is an approximately 11.2-mile utility line project located in northwestern Tulare County, California, near the cities of Visalia, Farmersville and

Exeter. The objective of the Big Creek Rebuild is to consolidate the two existing transmission lines into a single double circuit, 220 kilovolt (kV) transmission line in order to maintain safe and reliable electric service to customers and to serve existing and forecasted electrical demand in the southwestern portion of the San Joaquin Valley.

The project will reduce the number of existing towers inside of the St. Johns Designated Floodway from 24 to six (6). In addition, the project will reduce the number of existing towers inside of the Cottonwood Creek Designated Floodway from 12 to five (5). Existing tower footings will be removed down to a maximum of three feet below ground. All construction sites will be restored to pre-project conditions following the removal of the towers and all materials will be disposed of outside of the designated floodways.

The proposed project conforms to all Title 23 Standards.

5.1 – Hydraulic Analysis

The proposed project will reduce the number of towers inside of the St. Johns and Cottonwood Creek Designated Floodway's, therefore a hydraulic analysis was not required.

5.2 – Geotechnical Analysis

The proposed project does not involve any levees, therefore a geotechnical analysis was not required.

6.0 – AGENCY COMMENTS AND ENDORSEMENTS

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- The U.S. Army Corps of Engineers 208.10 comment letter has been received for this application. The USACE District Engineer has no comments or recommendations on the proposed project because it will not affect a federally constructed project. The letter is incorporated into the permit as Exhibit A.

7.0 – CEQA ANALYSIS

Board staff has prepared the following CEQA Findings:

The Board, as a responsible agency, has independently reviewed the analyses in the Draft Environmental Impact Statement (DEIR) (SCH No. 2008081090, June 2009) and

the Final EIR (FEIR, February 2010), on the Southern California Edison's San Joaquin Cross Valley Loop Transmission Line Project and Mitigation Monitoring and Reporting Plan (MMRP) submitted by Public Utilities Commission and has reached its own conclusions regarding them. The PUC, as the lead agency, determined the project would have a significant effect on the environment and approved Decision 10-07-043 on July 29, 2010, on Application 08-05-039 (which includes a Statement of Facts, Findings, Statement of Overriding Considerations, and Mitigation Monitoring, Reporting and Compliance Program). Moreover, such changes or alterations are within the responsibility and jurisdiction of the PUC and such changes have been adopted by that agency. These documents including project design and may be viewed or downloaded from the Central Valley Flood Protection Board website at <http://www.cvfpb.ca.gov/meetings/2013/2-22-2013> under a link for this agenda item. The documents are also available for review in hard copy at the Board and PUC offices.

The Board finds that the proposed removal of 24 existing steel lattice towers from inside the St. John's Designated Floodway and replace with six (6) tubular steel poles; and remove 12 steel lattice towers from inside of the Cottonwood Creek Designated Floodway and replace with two (2) tubular steel poles and three (3) steel lattice towers are within the scope of the Draft Environmental Impact Statement (DEIR) (SCH No. 2008081090, June 2009) and the Final EIR (FEIR, February 2010), and therefore constitutes a subsequent activity to the EIR. The Board further finds that no new environmental effects could occur and no new mitigation measures are required pursuant to CEQA Guidelines section 15162. Therefore, no new environmental document is required pursuant to CEQA Guidelines section 15168.

8.0 – SECTION 8610.5 CONSIDERATIONS

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on the entire State Plan of Flood Control:

The St. Johns and Cottonwood Creek Designated Floodway's are not included in the State Plan of Flood Control (Section 12648, CA Water Code). However, the project reduces the number of voltage towers inside an Adopted Plan of Flood Control (Title 23, §4) which is considered an improvement.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

There will be no effects to the proposed project from reasonable projected future events.

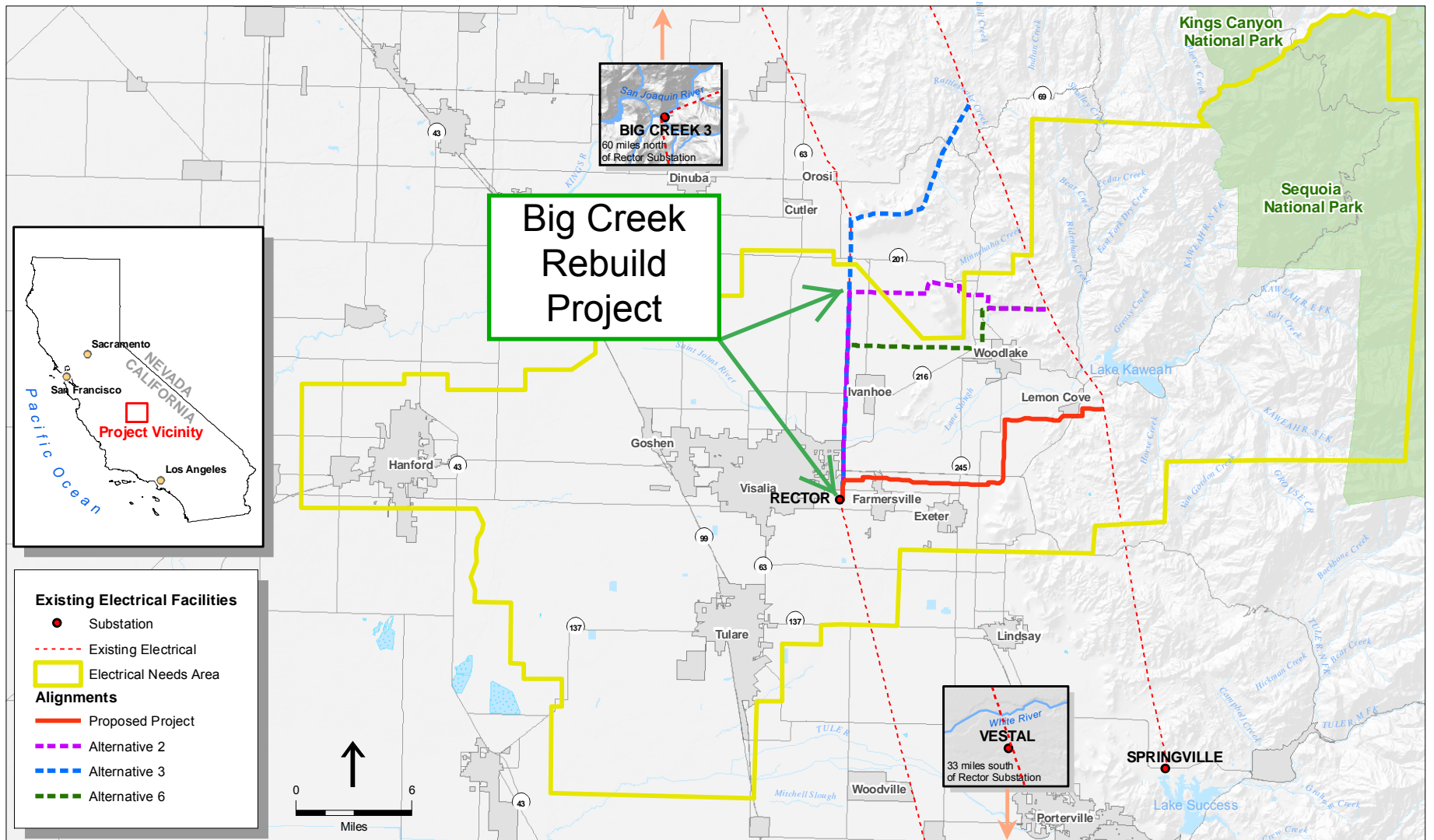
9.0 – STAFF RECOMMENDATION

Staff recommends that the Board adopt Resolution No. 2013-03, which constitutes the written findings and decisions in the matter of Permit No. 18812. The resolution contains the CEQA findings; Findings of Fact; and approval of Permit No. 18812; and directs the Executive Officer to take the necessary actions to prepare and execute the permit and related documents and to file a Notice of Determination with the State Clearinghouse.

10.0 – LIST OF ATTACHMENTS

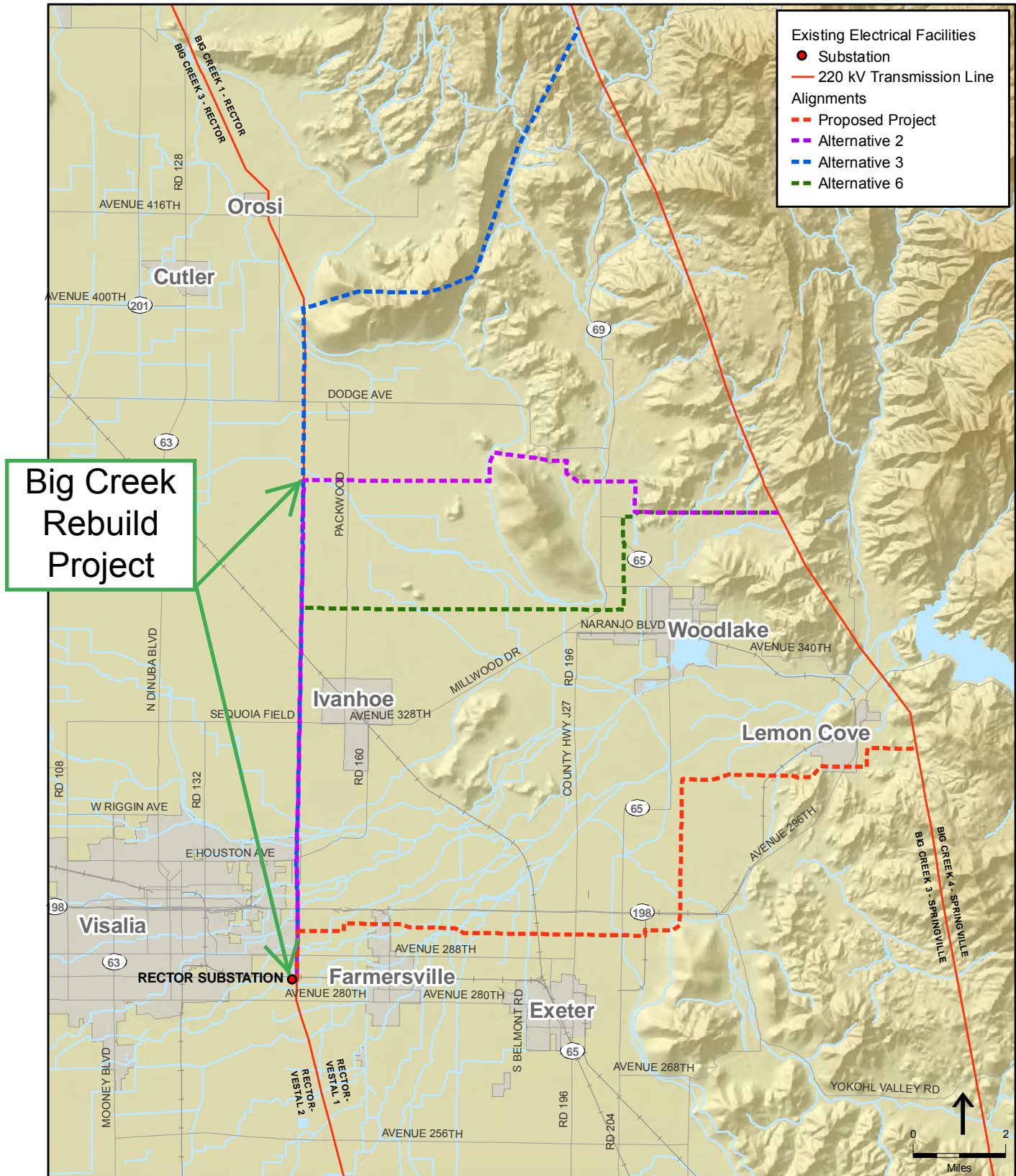
- A. Location Maps and Site Photographs
- B. Draft Permit No. 18812
- C. Resolution No. 2013-03
- D. Project Drawings

Design Review:	Gary W. Lemon P.E.
Environmental Review:	James Herota, Andrea Mauro
Document Review:	Mitra Emami P.E., Len Marino P.E.



San Joaquin Cross Valley Loop Transmission Project . 207584.01

Figure ES-1
Project Location



SOURCE: ESRI, 2008; SCE, 2008; TBM, 2008

San Joaquin Cross Valley Loop Transmission Project. 207584.01

Figure ES-2
Proposed Project Overview



High voltage towers inside the St. John's River Floodway.



Additional towers inside the St. John's River Designated Floodway.

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DRAFT

STATE OF CALIFORNIA
THE RESOURCES AGENCY
THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 18812 BD

This Permit is issued to:

Southern California Edison
14804 Ivanhoe Drive
Visalia, California 93292

To remove 24 existing steel lattice towers from inside the St. John's Designated Floodway and replace with six (6) tubular steel poles. To remove 12 steel lattice towers from inside of the Cottonwood Creek Designated Floodway and replace with two (2) tubular steel poles and three (3) steel lattice towers. The Southern California Edison (SCE) Big Creek Rebuild Project follows County Road 148 and Ketchum Ditch Road in a north-south direction for 11.2-miles beginning at the SCE Reactor Substation southeast of Visalia and terminates approximately 500-feet south of Cottonwood Creek (Section 14,23, T18S, R25E, MDB&M, St. Johns River, Tulare County).

NOTE: Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

(SEAL)

Dated: _____

Executive Officer

GENERAL CONDITIONS:

ONE: This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

TWO: Only work described in the subject application is authorized hereby.

THREE: This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

FOUR: The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

FIVE: Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection Board.

SIX: This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

SEVEN: It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

EIGHT: This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

NINE: The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

TEN: The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

ELEVEN: The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

TWELVE: Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

SPECIAL CONDITIONS FOR PERMIT NO. 18812 BD

THIRTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

FOURTEEN: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

FIFTEEN: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

SIXTEEN: The Central Valley Flood Protection Board and the Department of Water Resources shall not be held liable for any damages to the permitted encroachment(s) resulting from flood fight, operation, maintenance, inspection, or emergency repair.

SEVENTEEN: No construction work of any kind shall be done in the St. Johns River and Cottonwood Creek Designated Floodways during the flood season from November 1st to April 15th without prior approval from the Central Valley Flood Protection Board.

EIGHTEEN: Upon receipt of a signed copy of the issued permit the permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

NINETEEN: A minimum clearance of 25-feet shall be provided between the levee crown of the St. John's River and the overhead wire crossing.

TWENTY: All debris that may accumulate around the towers within the St. John's River and Cottonwood Creek Designated Floodways shall be completely removed from the floodway following each flood season.

TWENTY-ONE: The voids left by the removal of the existing towers shall be backfilled and compacted to a density equal to that of the adjacent undisturbed material.

TWENTY-TWO: All debris generated by this project shall be disposed of outside the St. John's River and Cottonwood Creek Designated Floodways.

TWENTY-THREE: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources or any other agency responsible for maintenance.

TWENTY-FOUR: The permitted encroachment(s) shall not interfere with operation and maintenance of the flood control project. If the permitted encroachment(s) are determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify or remove the permitted encroachment(s) under direction of the Central Valley Flood Protection Board or Department of Water Resources. If the permittee does not comply, the Central Valley Flood Protection Board may modify or remove the encroachment(s) at the permittee's expense.

TWENTY-FIVE: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

TWENTY-SIX: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

TWENTY-SEVEN: The letter from the Department of the Army dated January 28, 2013 is attached to this permit as Exhibit A in reference to this project.

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REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. Army Engineer District, Sacramento
Corps of Engineers
1325 J Street
Sacramento, California 95814-2922

Flood Protection and Navigation Section (18812)

JAN 28 2013

Mr. Jay Punia, Executive Officer
Central Valley Flood Protection Board
3310 El Camino Avenue, Room 151
Sacramento, California 95821

Dear Mr. Punia:

We have reviewed a permit application by Southern California Edison (application number 18812). This project includes removing 24 existing steel lattice towers from inside the St. Johns Designated Floodway and replacing with six (6) tubular steel poles. The project also includes removing 12 steel lattice towers from inside of the Cottonwood Creek Designated Floodway and replacing with two (2) tubular steel poles and three (3) steel lattice towers. This Southern California Edison (SCE) Big Creek Rebuild Project follows County Road 148 and Ketchum Ditch in a north-south direction for 11.2 miles beginning at the SCE Reactor Substation southeast of Visalia and terminates approximately 500 feet south of Cottonwood Creek. The location of the St. Johns proposed work is at 36.349831°N 119.243179°W NAD83, Tulare County, California.

The District Engineer has no comments or recommendations regarding flood control because the proposed work does not affect a federally constructed project.

A Section 10 and/or Section 404 permit application (201200621) is in process for this work.

A copy of this letter is being furnished to Mr. Don Rasmussen, Chief, Flood Project Integrity and Inspection Branch, 3310 El Camino Avenue, Suite LL30, Sacramento, CA 95821.

Sincerely,

A handwritten signature in black ink that reads "Megan G. Nagy".

Meegan G. Nagy, P.E.
Chief, Flood Protection and Navigation Section

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**STATE OF CALIFORNIA
THE NATURAL RESOURCES AGENCY
CENTRAL VALLEY FLOOD PROTECTION BOARD**

**RESOLUTION NO. 2013-03
FINDINGS AND DECISION AUTHORIZING ISSUANCE OF
ENCROACHMENT PERMIT NO. 18812**

**SOUTHERN CALIFORNIA EDISON
TULARE COUNTY**

WHEREAS, the Southern California Edison (SCE) proposes to construct, operate and maintain the San Joaquin Cross Valley Loop Transmission Project to build electrical facilities necessary to maintain safe and reliable electric service to customers, and serve the forecasted electrical demand in the southeastern portion of the San Joaquin Valley; and

WHEREAS, SCE submitted Application No. 18812 to the Board on September 17, 2012 to remove 24 existing steel lattice towers from inside the St. John's Designated Floodway and replace with six (6) tubular steel poles; and remove 12 steel lattice towers from inside of the Cottonwood Creek Designated Floodway and replace with two (2) tubular steel poles and three (3) steel lattice towers; and

WHEREAS, the project sites follows County Road 148 and Ketchum Ditch Road in a north-south direction for 11.2-miles beginning at the SCE Reactor Substation southeast of Visalia and terminates approximately 500-feet south of Cottonwood Creek, in Tulare County including portions of the cities of Visalia, Farmersville and the community of Lemon Cove; and

WHEREAS, the Public Utilities Commission as lead agency under the California Environmental Quality Act, Public Resources Code sections 21000 *et seq.* ("CEQA"), prepared a Draft Environmental Impact Statement (DEIR) (SCH No. 2008081090, June 2009) and the Final EIR (FEIR, February 2010), on the Southern California Edison's San Joaquin Cross Valley Loop Transmission Line Project and Mitigation Monitoring and Reporting Plan (MMRP) (incorporated herein by reference and available at the Central Valley Flood Protection Board (Board) offices or Public Utilities Commission offices);

WHEREAS, On July 29, 2010, Public Utilities Commission approved Decision 10-07-043 on Application 08-05-039 for the San Joaquin Cross Valley Loop Transmission Project, the MMRP, and approved findings and a statement of overriding considerations pursuant to the CEQA Guidelines (incorporated herein by reference); and

WHEREAS, Public Utilities Commission analyzed the removal of 24 existing steel lattice towers from inside the St. John's Designated Floodway and replace with six (6) tubular steel poles; and remove 12 steel lattice towers from inside of the Cottonwood Creek Designated Floodway and replace with two (2) tubular steel poles and three (3) steel lattice towers; and

WHEREAS, The U.S. Army Corps of Engineers comment letter was received for this application on January 28, 2013. The letter indicates that the USACE District Engineer has no comments or recommendations regarding flood control because the proposed work does not affect a federally constructed project and it has been incorporated into the permit as Exhibit B; and

WHEREAS, Board staff completed a technical review of Permit Application No. 18812; and

NOW, THEREFORE, BE IT RESOLVED THAT,

Findings of Fact

1. The Board hereby adopts as findings the facts set forth in the Staff Report.
2. The Board has reviewed all Attachments, Exhibits, Figures, and References listed in the Staff Report.

CEQA Findings

3. The Central Valley Flood Protection Board, as a responsible agency, has independently reviewed the analyses in the Draft Environmental Impact Statement (DEIR) (SCH No. 2008081090, June 2009) and the Final EIR (FEIR, February 2010), on the Southern California Edison's San Joaquin Cross Valley Loop Transmission Line Project and Mitigation Monitoring and Reporting Plan (MMRP) submitted by Public Utilities Commission and has reached its own conclusions regarding them.
4. The Board finds that the proposed removal of 24 existing steel lattice towers from inside the St. John's Designated Floodway and replace with six (6) tubular steel poles; and remove 12 steel lattice towers from inside of the Cottonwood Creek Designated Floodway and replace with two (2) tubular steel poles and three (3) steel lattice towers are within the scope of the previously adopted Draft Environmental Impact Statement (DEIR) (SCH No. 2008081090, June 2009) and the Final EIR (FEIR, February 2010), and therefore constitutes a subsequent activity. The Board further finds that no new environmental effects could occur and no new mitigation measures are required pursuant to CEQA Guidelines section 15162. Therefore, no new environmental document is required pursuant to CEQA Guidelines section 15168.
5. Custodian of Record. The custodian of the CEQA record for the Board is its Executive Officer, Jay Punia, at the Board offices at 3310 EI Camino Avenue, Room 151, Sacramento, California 95821.

Considerations pursuant to Water Code section 8610.5

6. The Board has considered all the evidence presented in this matter, including the original application for Permit No. 18812 and technical documentation provided by Public Utilities

Commission on the San Joaquin Cross Valley Loop Transmission Project proposed improvements, past and present Staff Reports and attachments, the original Environmental Impact Report on the San Joaquin Cross Valley Loop Transmission Project (Draft and Final Versions), and Public Utilities Commission approved Application 08-05-039 including findings, Statement of Overriding Considerations, and the Mitigation Monitoring and Reporting Program. Moreover, such changes or alterations are within the responsibility and jurisdiction of the PUC and such changes have been adopted by that agency.

7. **Best Available Science.** In making its findings, the Board has used the best available science relating to the issues presented by all parties and the design is in compliance with these standards.
8. **Effects on Facilities of the State Plan of Flood Control.** This project has no adverse effects on facilities of the State Plan of Flood Control, and is consistent with the adopted 2012 Central Valley Flood Protection Plan.
9. **Effects of Reasonably Projected Future Events.** There are no other foreseeable projected future events that would impact this project.

Other Findings/Conclusions regarding Issuance of the Permit.

10. Based on the foregoing and particularly on the evidence that the condition of the existing Southern California Edison (SCE) San Joaquin Cross Valley Loop Transmission Project, prior to the beginning of construction, poses an unacceptable risk to life and property, the Board finds and concludes that the issuance of Encroachment Permit No. 18812 for the relocation of existing steel lattice towers from inside the St. John's Designated Floodway and the Cottonwood Creek Designated Floodway and replacement with tubular steel poles and lattice towers is in the public interest.
11. This resolution shall constitute the written decision of the Board in the matter of Permit No. 18812

Approval of Encroachment Permit No. 18812

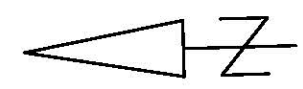
12. Based on the foregoing the Central Valley Flood Protection Board hereby approves issuance of Encroachment Permit No. 18812 in substantially the form provided as Staff Report Attachment D.
13. The Board directs the Executive Officer to take the necessary actions to prepare and execute Encroachment Permit No. 18812 and all related documents, and to prepare and file a Notice of Determination pursuant to CEQA for the SCE San Joaquin Cross Valley Loop Transmission Project.

PASSED AND ADOPTED by vote of the Board on _____, 2013

William H. Edgar
President

Jane Dolan
Secretary

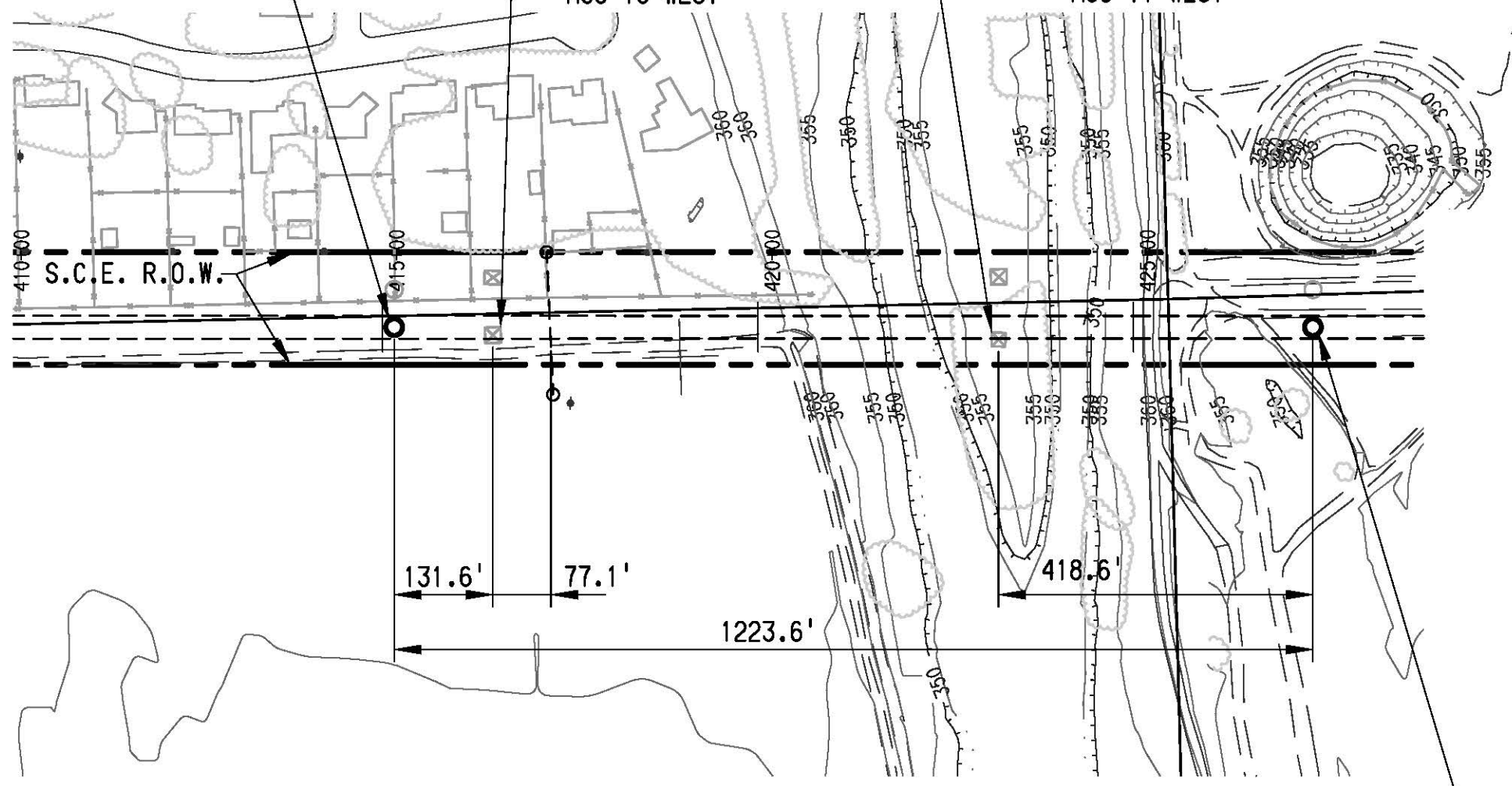
CONST. 16 WEST
NEW STEEL POLE
STA 415+07.25
N= 2011387.682
E= 6490050.936



EXISTING LATTICE TOWER
M68-T8 WEST

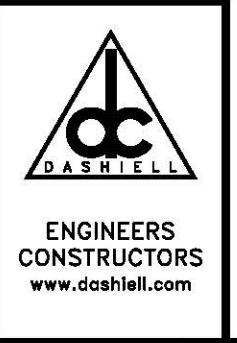
EXISTING LATTICE TOWER
M69-T1 WEST

- CENTERLINE TRANSMISSION ALIGNMENT
- TRANSMISSION R.O.W.
- TOWNSHIP SECTION LINE
- PROPOSED 220 KV CONDUCTOR
- EXISTING DISTRIBUTION CROSSING
- PROPOSED TRANSMISSION STEEL POLE
- EXISTING TRANSMISSION/DISTRIBUTION STRUCTURE




FOR INFORMATION ONLY
NOT FOR CONSTRUCTION

0 200 400
SCALE IN FEET (HORIZONTAL)



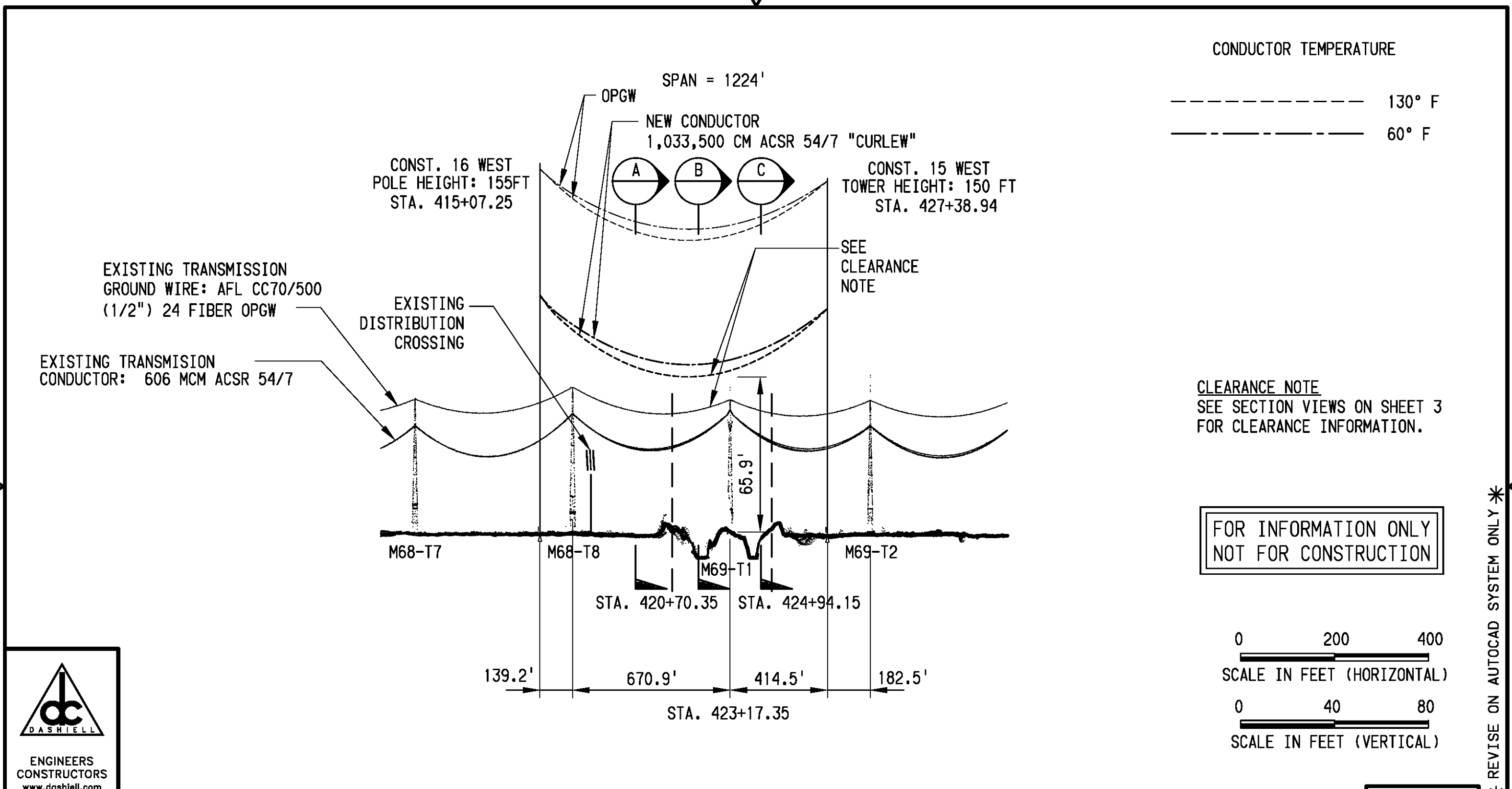
CONST. 15 WEST
NEW STEEL POLE
STA 427+38.94
N= 2010156.522
E= 6490015.007

PLATE I

LOCATION BIG CREEK 3-RECTOR 1/BIG CREEK 1-RECTOR 1 220KV T/L									
ST. JOHN'S RIVER CROSSING CONST 16 WEST AND CONST 15 WEST									
									
1	ISSUED FOR INFORMATION	02/14/12	900407336						
0	ISSUED FOR INFORMATION		900407336						
REFERENCE DRAWINGS	NO	REVISIONS	DATE	SAP WO	SUPV	APPROVED	ENGR	CK'D	MADE P.E.
D/L EXHIBIT1B4SH1.DWG EXHIBIT-1B-4-1 SH.1									

* REVISE ON AUTOCAD SYSTEM ONLY *

08-17-11



CONDUCTOR TEMPERATURE
 ----- 130° F
 ----- 60° F

CLEARANCE NOTE
 SEE SECTION VIEWS ON SHEET 3
 FOR CLEARANCE INFORMATION.

FOR INFORMATION ONLY
 NOT FOR CONSTRUCTION

0 200 400
 SCALE IN FEET (HORIZONTAL)
 0 40 80
 SCALE IN FEET (VERTICAL)



PLATE II

										LOCATION BIG CREEK 3 - RECTOR 1 / BIG CREEK 1 - RECTOR 1 220KV T/L			
										ST. JOHN'S RIVER CROSSING CONST 16 WEST AND CONST 15 WEST			
		2	ISSUED FOR INFORMATION	02/14/12	900407336			CKW	MAT	AGE	ZZ		
		1	ISSUED FOR INFORMATION	11/28/11	900407336			CKW	MAT	AGE	ZZ		
		0	ISSUED FOR INFORMATION	11/18/11	900407336			CKW	MAT	AGE	ZZ		
REFERENCE DRAWINGS	NO		REVISIONS	DATE	SAP WO	SUPV	APPROVED	ENGR	CK'D	MADE	P.E.	D/L	EXHIBIT-1B4SH2.DWG



EXHIBIT-1B-4-2 SH.2

* REVISE ON AUTOCAD SYSTEM ONLY *

08-17-11

