



Memo

Date: Thursday, April 04, 2024

Project: Old Fitzhugh Road

To: Mr. Keenan Smith, City of Dripping Springs

From: Leslie Pollack, P.E., PTOE, HDR Engineering, Inc.

Subject: Pedestrian Illumination Considerations

The purpose of this memorandum is to document the pedestrian illumination changes to date on the Old Fitzhugh Road and to provide information to inform a decision moving forward.

30% Plans Specifications and Estimates

30% design plans included minimal safety pedestrian level illumination, with “Mercer St style” illumination assemblies at the new activity nodes and two existing roadway crossings including RM 12 entrance. The design included electrical service, conduit, cabling, and eight illumination assemblies. The illumination construction cost was estimated at \$225,398.00 (including contingency and inflation). An “add alternate” was included in the estimate for low-voltage pathway lighting at \$595,000.00.

60% Plans Specifications and Estimates

During the preliminary application process, TxDOT provided feedback that continuous safety pedestrian illumination can be considered for TxDOT Transportation Alternatives funding. With this information, the design of continuous safety pedestrian illumination was added to the 60% design plans. The design included electrical services, conduit, cabling, 48 illumination assemblies for the pedestrian pathway, parking lot spaces along the project limits, and roadway crossing including the RM 12 entrance. The illumination construction cost was estimated at \$1,052,089 (including contingency and inflation).

TxDOT Transportation Alternatives Funding

With official submission of the TxDOT TA application, illumination features were considered “amenities” and TxDOT capped the amenity funding at 15% of the total project cost. Since TxDOT funding is centered on “pedestrian elements”, 15% of the project costs required restricting funding for illumination. The TxDOT TA grant funds include \$233,294.00 for illumination (including contingency and inflation).

90% Plans Specifications and Estimates

As we progress with 90% plans, final direction on the illumination design is needed. We recommended proceeding with the design of continuous safety pedestrian illumination, which provides adequate safety illuminance for the entire pedestrian pathway, parking lot spacing along the project limits, and roadway crossing including the RM entrance. The illumination design plans will be developed such that an “deduct alternative” can be considered if illumination costs are higher than funding allows. This will allow construction of fewer illumination assemblies installed for minimal safety level illuminance at the activity nodes and



two existing roadway crossings including RM 12 entrance without significant redesign time. A funding increase of \$818,795.00 is estimated to construct continuous pedestrian illumination.

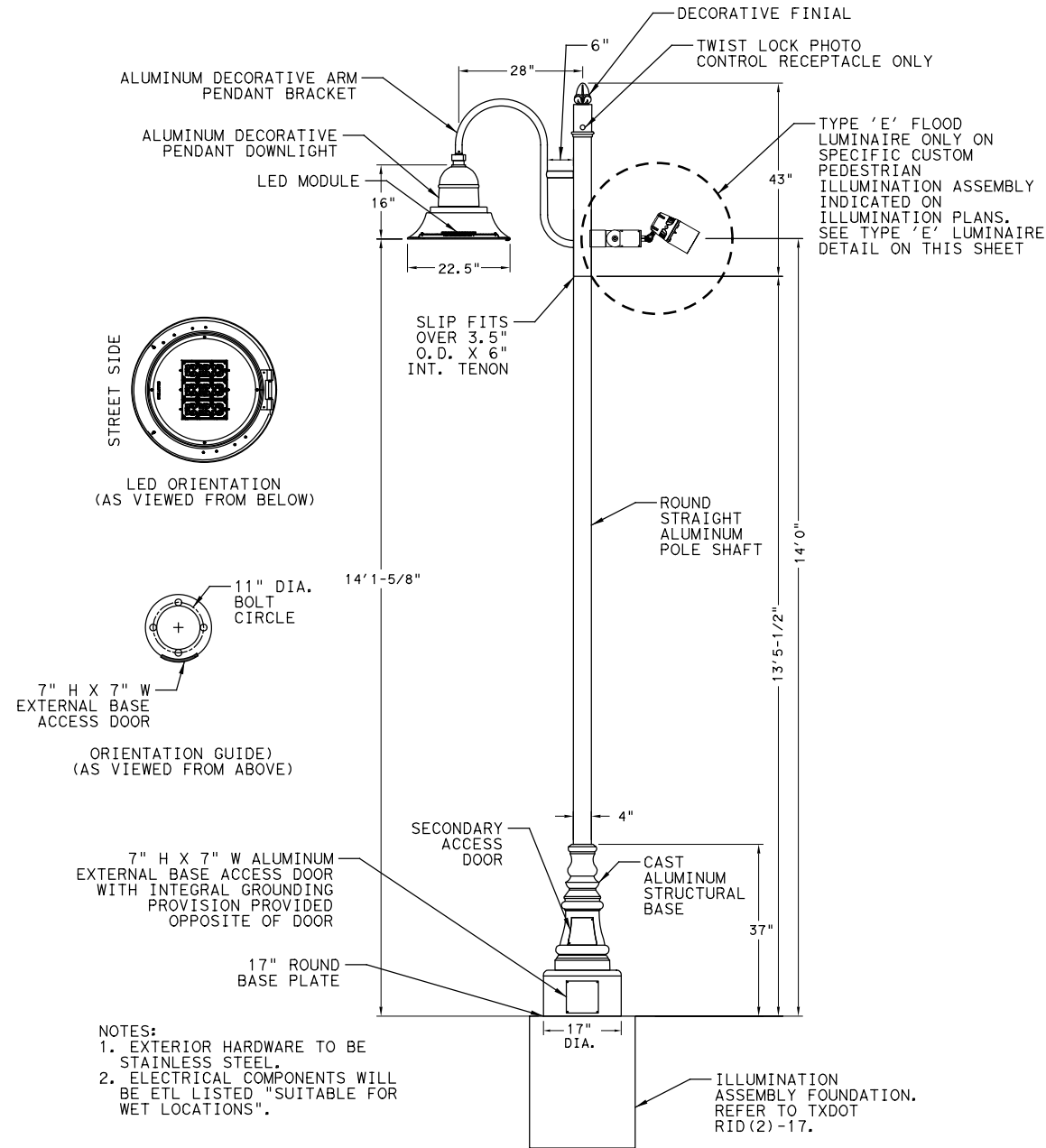
Continuous Pedestrian Illumination

Several factors should be weighed on the consideration of providing continuous safety pedestrian illumination for the entire project limits:

- Increased project cost now with the understanding that future safety pedestrian illumination construction could have a substantial impact on any future project cost due to the continuous cost increases of electrical and illumination product/ material throughout the industry.
- Increased safety benefits and enhancing elements of the city's infrastructure, architecture, landscape, and iconic elements with providing adequate safety illumination for the pedestrian pathway, parking lot spaces, and roadway crossings through the whole project.
- Continues the "Mercer Street" custom illumination assembly aesthetic throughout corridor and surrounding area instead of having multiple types of safety illumination assemblies.
- Adequate safety pedestrian illumination in commercial business districts provides interconnectivity of the city, which is vitally important for greater urban community's desire to have nighttime environments that are accessible, secure, and suitable for each neighborhood's needs.
- Maintain the dark sky compliant safety pedestrian illumination throughout the city with minimal light trespass and light pollution beyond the project limits.

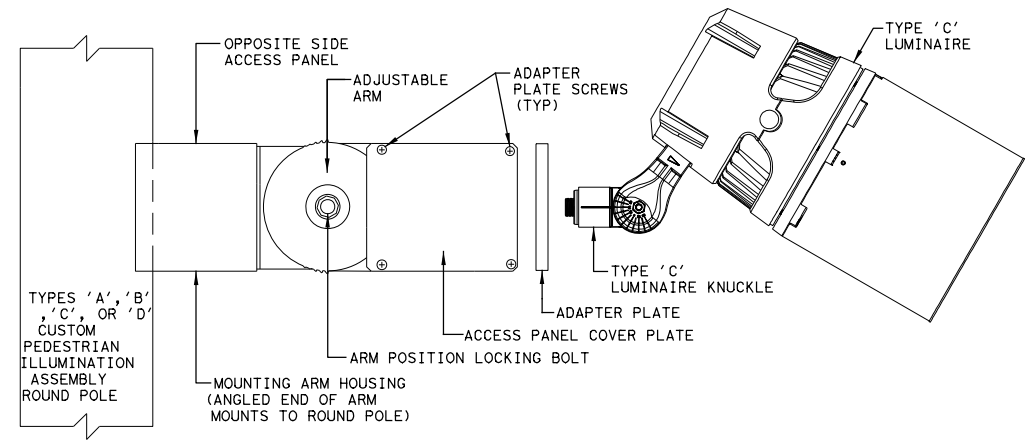
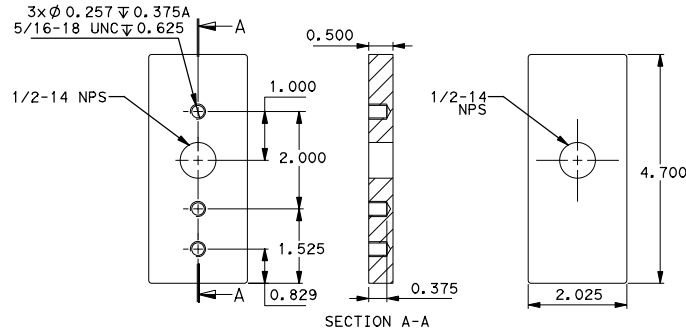
Attachments:

- Cut sheet of "Mercer Street" custom LED illumination assembly
- Example sheet of continuous illumination

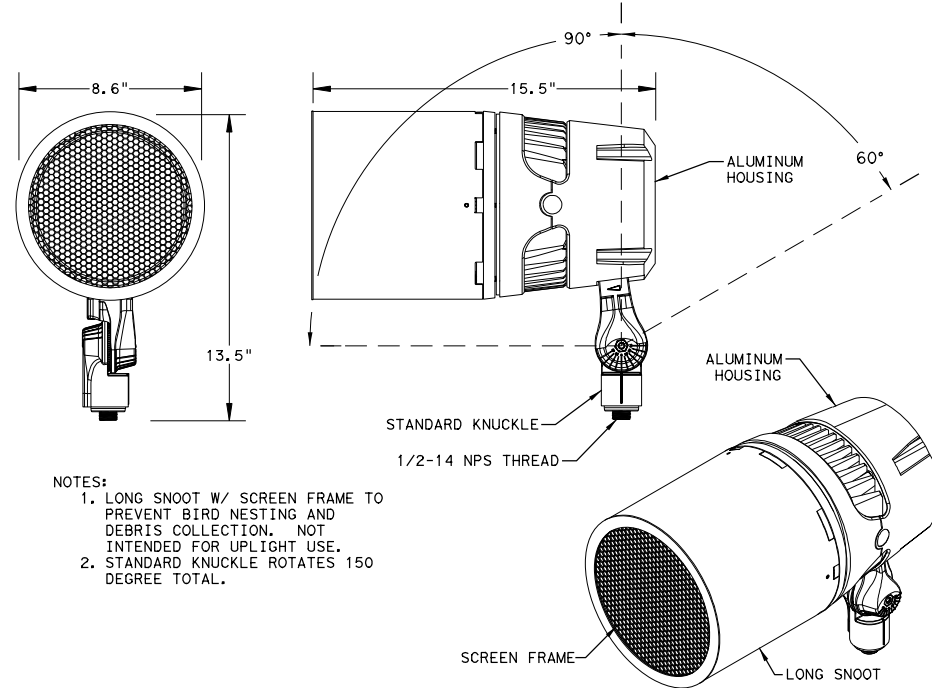


- NOTES:
1. EXTERIOR HARDWARE TO BE STAINLESS STEEL.
2. ELECTRICAL COMPONENTS WILL BE ETL LISTED "SUITABLE FOR WET LOCATIONS".

N. T. S.



DIRECT ROUND POLE MOUNT ARM BRACKET



- NOTES:
1. LONG SNOOT W/ SCREEN FRAME TO PREVENT BIRD NESTING AND DEBRIS COLLECTION. NOT INTENDED FOR UPLIGHT USE.
2. STANDARD KNUCKLE ROTATES 150 DEGREE TOTAL.

MONUMENT SIGN FLOOD LUMINAIRE

TYPE 'E' CUSTOM MONUMENT SIGN FLOOD LUMINAIRE ASSEMBLY

N. T. S.

PRELIMINARY-FOR INFORMATION ONLY
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW AND IS NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMITTING PURPOSES.
Supervised By: PAUL K. DAVILA
P.E. Serial No. 101043
Date: 1/4/2024

NO.	DATE	REVISION	APPROVED

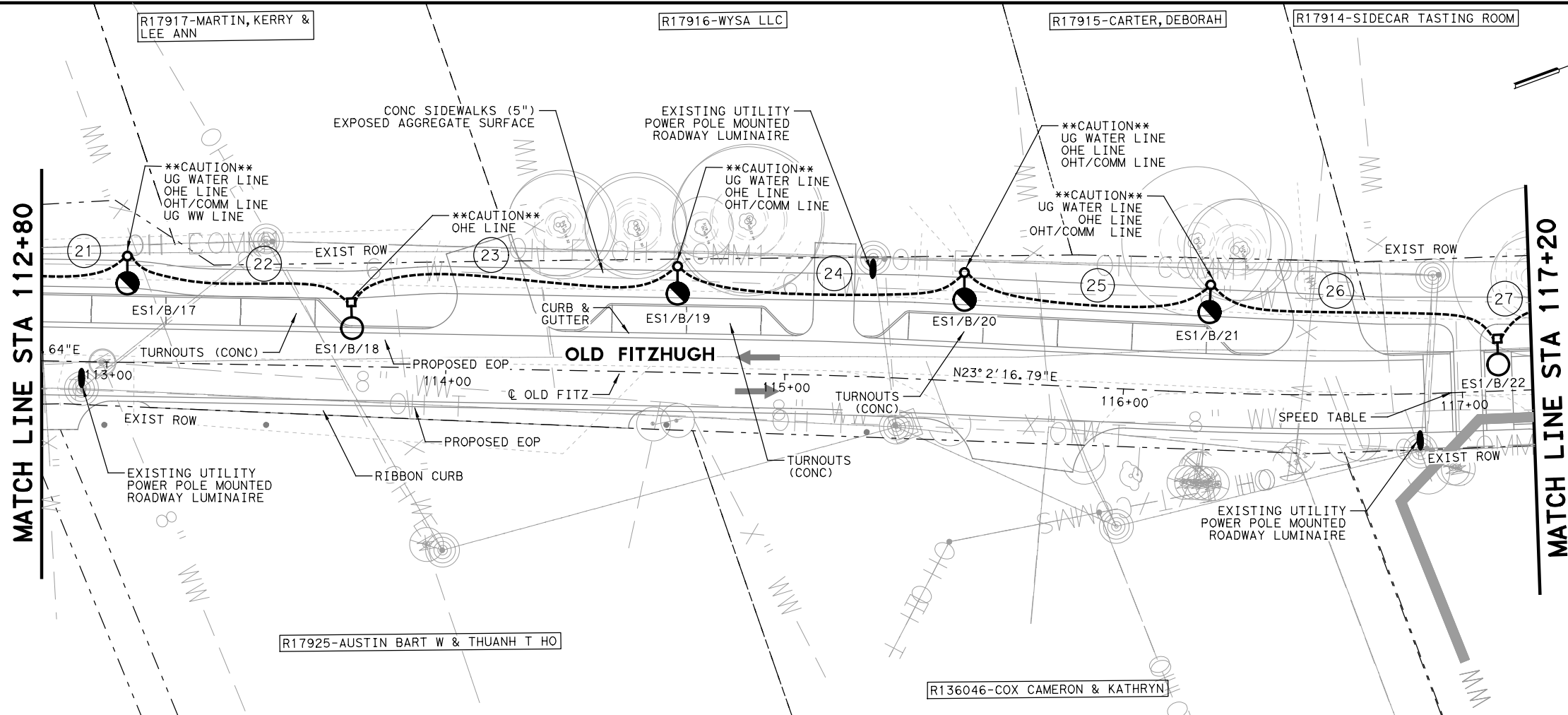
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THE CITY OF
DRIPPING SPRINGS
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OLD FITZHUGH RD
ILLUMINATION DETAILS

SHEET 1 OF 1

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
GM				OLD FITZ
GRAPHICS	STATE	DISTRICT	COUNTY	SHEET NO.
GM	TEXAS	AUS	HAYS	147
CHECK	CONTROL	SECTION	JOB	
PKD	XXX	XXX	XXX	



LEGEND

- TYPE A: CUSTOM PEDESTRIAN ILLUMINATION ASSEMBLY, 17'-1/2" MOUNTING HEIGHT WITH TRANSFORMER BASE, (1) LED LUMINAIRE WITH TYPE IV (DARK SKY) DISTRIBUTION OPTICS
- TYPE B: CUSTOM PEDESTRIAN ILLUMINATION ASSEMBLY, 17'-1/2" MOUNTING HEIGHT WITH SHOE BASE, (1) LED LUMINAIRE WITH TYPE IV (DARK SKY) DISTRIBUTION OPTICS
- TYPE C: CUSTOM PEDESTRIAN ILLUMINATION ASSEMBLY, 17'-1/2" MOUNTING HEIGHT WITH SHOE BASE, (1) LED LUMINAIRE WITH TYPE III (DARK SKY) DISTRIBUTION OPTICS WITH BACKLIGHT SHIELDING
- TYPE D: CUSTOM PEDESTRIAN ILLUMINATION ASSEMBLY, 17'-1/2" MOUNTING HEIGHT WITH TRANSFORMER BASE, (1) LED LUMINAIRE WITH TYPE III (DARK SKY) DISTRIBUTION OPTICS WITH BACKLIGHT SHIELDING
- TYPE E: CUSTOM SPECIALTY ARCHITECTURAL FLOOD ILLUMINATION ASSEMBLY, 14'-0" MOUNTING HEIGHT WITH POLE ARM BRACKET, (1) LED LUMINAIRE WITH 40 DEGREE DISTRIBUTION OPTICS WITH FULL GLARE SHIELDING
- ELECTRICAL SERVICE ASSEMBLY, 120/240 VOLT, 1 PHASE, 3 WIRE, METERED PEDESTAL
- GROUND BOX WITH APRON (NEMA 3R)
- CONDUCTORS IN CONDUIT RUN (TRENCH)
- CONDUCTORS/CONDUIT SEGMENT NO.
- ILLUMINATION ASSEMBLY DESIGNATION
- SERVICE POINT CIRCUIT DESIGNATION
- ELECTRICAL SERVICE DESIGNATION



GENERAL NOTES:

1. ALL WORK SHALL BE COMPLETED ACCORDING TO APPLICABLE TXDOT STANDARDS, CITY OF DRIPPING SPRINGS STANDARDS, UTILITY COMPANY STANDARDS, AND THE NATIONAL ELECTRIC CODE.
2. THE CONTRACTOR SHALL VERIFY WITH ALL UTILITY COMPANIES THE EXACT LOCATION OF EXISTING/PROPOSED UNDERGROUND AND OVERHEAD UTILITIES PRIOR TO CONSTRUCTION TO AVOID CONFLICT OR DAMAGE TO THE EXISTING/PROPOSED UTILITIES. THE CONTRACTOR SHALL SEEK THE APPROVAL OF THE ENGINEER FOR ADJUSTING THE OFFSETS TO AVOID DAMAGE TO THE EXISTING/PROPOSED UNDERGROUND AND OVERHEAD UTILITIES. REFER TO THE UTILITY PLANS FOR ADDITIONAL INFORMATION.
3. REFER TO ILLUMINATION SUMMARIES, SCHEMATICS, SCHEDULES, DETAILS, AND TXDOT STANDARDS FOR ADDITIONAL INFORMATION.
4. HAND DUG ILLUMINATION ASSEMBLY DRILL SHAFTS ARE REQUIRED FOR ALL LOCATIONS LABELED ****CAUTION**** ON THE ILLUMINATION PLANS. THE INDICATED LOCATIONS ARE FOR POTENTIAL IMPACTS TO EXISTING/PROPOSED UNDERGROUND UTILITIES. ONE WEEK NOTICE REQUIRED FOR POT HOLING CLOSER THAN 1'-6" OFFSET OF ALL EXISTING/PROPOSED UNDERGROUND UTILITIES FOR ILLUMINATION ASSEMBLY DRILL SHAFTS. HAND DUG ILLUMINATION ASSEMBLY DRILL SHAFTS TO BE SUBSIDIARY TO BID ITEM 0416 6088.
5. CONTRACTOR TO ROUTE ALL UNDERGROUND CONDUCTORS IN CONDUIT SEGMENT RUNS OUTSIDE OF LANDSCAPE AREAS IN ORDER TO AVOID IMPACT TO TREE, SHRUB, OR PLANT ROOTS. TYPICAL FOR ALL SHOWN ON THE ILLUMINATION PLANS. REFER TO LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.
6. *****ARCH FLASH HAZARD***** - THE CONTRACTOR TO COORDINATE THE INSTALLATION OF THE ILLUMINATION ASSEMBLIES WITH ALL OVERHEAD UTILITY COMPANIES. ALL UTILITY COMPANIES TO PROVIDE PROTECTION FROM THE OVERHEAD UTILITY LINES DURING ILLUMINATION ASSEMBLY INSTALLATIONS.
7. CONTRACTOR TO COORDINATE FINAL IRRIGATION SYSTEM CONTROLLER(S) ELECTRICAL VOLATGE, FULL LOADED AMPACITY REQUIREMENTS, AND FINAL LOCATIONS PRIOR TO ROUGH-IN. REFER TO LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

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OLD FITZHUGH RD

ILLUMINATION PLAN

STA 112+80 TO STA 117+20

SCALE: 1"=40' SHEET 7 OF 16

DESIGN	FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
GM			
GRAPHICS			
GM	STATE	DISTRICT	COUNTY
CHECK	TEXAS	AUS	HAYS
PKD	CONTROL	SECTION	JOB
CHECK	XXX	XXX	XXX
PKD			

OLD FITZ
SHEET NO.
137

