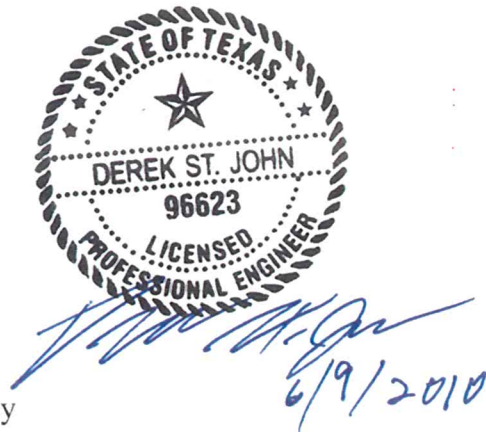


KIMBERLEY LANE ROADWAY RECONSTRUCTION AND
DRAINAGE IMPROVEMENTS
PRELIMINARY ENGINEERING REPORT
WBS NO. T-170018-0001-3

Prepared for



MEMORIAL CITY REDEVELOPMENT AUTHORITY
TAX INCREMENT REINVESTMENT ZONE NO. 17
(TIRZ No. 17)



Prepared by



**Lockwood, Andrews
& Newnam, Inc.**

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LOCKWOOD, ANDREWS & NEWNAM, INC.
FIRM NO. 2614

June, 2010

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING
OFFICE OF CITY ENGINEER
TRAFFIC & TRANSPORTATION SECTION
WASTEWATER OPERATIONS SECTION
WATER ENGINEERING SECTION
FINANCE SECTION

SUMMARY OF
TECHNICAL REVIEW COMMITTEE MEETING
AND RECORD OF DECISIONS AND ACTION ITEMS

DATE: March 24, 2010

PROJECT TITLE: TIRZ 17
Kimberley Lane Project,
From BW8 to W. Bough Lane

WBS NO.: WBS No. T-170018-0001-3

DESIGN CONSULTANT: Lockwood, Andrews, & Newnam, Inc.

SUPERVISING ENGINEER: Paresh Lad, P.E.

TRC DATE: March 19, 2010

Attendees:

City of Houston:

Paresh Lad, P.E.

Russell Vunam, P.E.

Sam Habibi, P.E.

Richard Smith, P.E.

Joe Hanak, P.E.

Roberto Gomez, P.E.

William Lu, P.E.

Ralph De Leon

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TIRZ 17:

Pat Walters, Executive Director

Lockwood, Andrews, & Newnam, Inc.:

Rafael Ortega, P.E.

Derek St. John, P.E.

Veda Montalbano, P.E.

I. Purpose

To review and discuss the recommendations provided by the engineering consultant, make decisions and provide directives. The recommendations are detailed in the Preliminary Engineering Report (PER) titled, Kimberley Lane Preliminary Engineering Report, dated February 2010, prepared by Lockwood, Andrews, & Newnam, Inc.

The Kimberley Lane Project proposes to address excessive roadway ponding and structural flooding during an extreme flood event, as well as provide additional in-line detention to address regional drainage issues. The drainage solution involves not only storm sewer improvements, but the raising of the existing roadway as much as 6-inches to minimize ponding depths, thus requiring the complete roadway reconstruction between BW8 and W. Bough Lane. The February 2010 PER study included the evaluation of all existing public and private utilities within the project limits. The age and condition of all public utilities, as well as coordination with the City of Houston's CIP and engineering department is necessary to ensure consideration of the required improvements.

II. Project Background

A. Introduction

The Kimberley Lane Project is identified in the City of Houston Comprehensive Drainage Plan (CDP) as an existing drainage system classified as insufficient capacity and or deficient. The CDP is a component of the COH Storm Drainage Facilities Improvement Program, as well as the City of Houston's Capital Improvement Plan (CIP) which identifies priority improvement projects. The Kimberley Project is located within the TIRZ 17 boundary. The TIRZ 17 conducted a thorough investigation of the Kimberley storm sewer system in a previous study, *Kimberley Lane Drainage Improvements*, dated May 2009, which further concluded the system deficiencies including extreme event sheetflow excessive roadway ponding and structural flooding. Based on the May 2009 study findings and recommendations, the TIRZ 17 authorized the current Kimberley Lane PER, to study the impacts and further improvements necessary to improve the drainage deficiencies.

B. February 2010 PER Findings & Recommendations

Although several drainage improvement alternatives were considered and analyzed, the most long term cost effective alternative that solved the extreme event roadway ponding and flooding involved the complete reconstruction of the roadway with the addition of inline detention to mitigate storage loss. The February 2010 PER includes a detailed engineering analysis of the engineering components associated with a roadway reconstruction project, including preliminary existing conditions assessment, evaluation, and recommendations of all affected infrastructure within the project study limits.

Drainage

Although the storm sewer system meets the City of Houston 2-year event, the system experiences excessive roadway ponding and flooding for the extreme event, exceeding the minimum City of Houston criteria. The recommended solution includes the reconstruction of the roadway to raise the roadway, and replacement of the existing 24-inch to 36-inch storm sewer built in 1962, and the construction of approximately 1100-ft of 6x3 box culvert additional inline detention (*Size Subject to change based on Regional Drainage Study Recommendations*).

Roadway

Based on the drainage recommendations, approximately 1300 LF of roadway reconstruction along Kimberley Lane, between the BW8 NB Frontage Road and West Bough Lane is proposed. The existing roadway is a 40-ft undivided concrete roadway section constructed in the early 1960's. The existing western project termini, west of the BW8 NB Frontage Road, consists of 4-12' lanes, with the existing eastern project termini, east of West Bough consisting of 4-10' lanes. Due to right of way constraints, existing development, and potential impacts to existing trees, the proposed roadway reconstruction section consists of a 44-ft section (4-11' lanes), from BW8 to just east of Town & Country Blvd., transitioning to a 40-ft section (4-10' lanes), from east of Town & Country Blvd to the eastern project termini near West Bough Lane.

Sidewalks

The existing sidewalks within the project limits are discontinuous and do not meet current City of Houston criteria. As part of the Kimberley Project it is proposed to reconstruct the sidewalks within the project limits to current ADA and City of Houston criteria. Approximately 350-ft of existing sidewalk is currently located on SBISD property at Bendwood Elementary. Due to existing tree impacts it is recommended to reconstruct the sidewalk to current criteria along the existing sidewalk alignment on SBISD property.

Public Utilities

Multiple public utilities are located within the Kimberley Lane project limits. Both longitudinal waterlines (6" to 8") and a 54-inch sanitary sewer trunkline exist within the project right of way. The waterlines were constructed in 1962, and it is recommended to replace the longitudinal waterline with a new 8-inch facility. The existing 54-inch sanitary sewer trunkline, constructed in 1966, is recommended for rehabilitation per the latest inspection records, as well as replacement of the existing manholes. Per coordination with the City of Houston Wastewater Operations Section, it is recommended to replace the existing sanitary sewer manholes with 6-ft diameter manholes with special manhole top structure details to facilitate maintenance and limit future pavement impacts. It is also recommended to replace all existing sanitary, water, and storm sewer laterals within the project limits.

Private Utilities

Several AT&T ductbanks, as well as Centerpoint Energy gas and electric facilities are located within the project limits. The project proposes to minimize impacts to the existing facilities with the proposed design. The proposed in-line detention 6x3 box culvert crossing with the AT&T ductbank will be coordinated in detail design to confirm any necessary AT&T relocations.

Existing Trees

Over 60 existing trees are located within or adjacent to the Kimberley Lane Project Right of Way. Landscaping plans and tree protection plans will be necessary to comply with the City of Houston's Tree Ordinance. Based on the arborist report, approximately 16 trees are recommended to be removed. In addition to traditional tree protection (pruning, fencing, root stimulation, etc.), it is also anticipated that isolated retaining walls along the right of

way may be necessary between the sidewalks and right of way to protect the existing adjacent trees and development.

Right of Way/Easement Acquisition

Although the proposed roadway is recommended to be reconstructed within the existing 60-ft right of way, several curb cuts are required to accommodate sidewalk ramps and crosswalks to meet ADA criteria.

Project Coordination

Project coordination will continue throughout design with the City of Houston, TIRZ 17, TxDOT, HCFCD, SBISD, Fonn Villas Subdivision, adjacent property owners, and several private utility entities. The project western termini ties into the existing BW8 NB Frontage Road and coordination with TxDOT will be necessary to coordinate the tie-in and traffic control plan. The SBISD, Pines Presbyterian Church, and adjacent businesses will also be necessary to minimize impacts during construction.

Traffic Control

The proposed traffic control and construction phasing plan involves a multiphase traffic control operation to minimize impacts to the traveling public, pedestrians, and adjacent development. Consideration of the adjacent school calendar, church schedule, and holiday seasons, were all considered in the preliminary construction schedule and sequence. The multi-phase traffic control plan includes a combination of one-way traffic operations and temporary partial and full roadway closure detours to minimize impacts, maximize safety, and accelerate construction time.

C. TRC Decisions and Directives

1. **Drainage & Roadway Ponding** – The proposed alternative for addressing the roadway ponding and flooding issues was accepted by the City of Houston. The proposed 6x3 Storm sewer size may vary due to the findings and recommendations to be determined in the Regional Drainage Study (*estimated completion July 2010*).
2. **Roadway Width** – The proposed roadway width is to be a 44-ft section, from the BW8 NB Frontage Road to just east of Town & Country Blvd, transitioning to a 40-ft section, from just east of Town & Country Blvd to West Bough Lane. The proposed roadway will be striped 4-lanes the entire project length and “No Parking” signs will be added within the project limits.
3. **Signals** – The existing signals need to be evaluated for necessary upgrades based on the City of Houston Design Manual, Chapter 15 Traffic and Signal Design Requirements. Proposed intersection layouts with sidewalks, ramps, and crosswalks should be developed to identify any impacts to the existing signal pole locations. Relocation of the poles should be evaluated to identify adequate arm lengths and Chapter 15 compliance. Per Chapter 15 guidelines, all signals require interconnect, via construction of a 4” interduct with 4 -1” ducts, as well as LED lamps. LAN is to coordinate with the City of Houston Signal group to verify necessary signal improvements.

4. **54-inch Sanitary Sewer Trunkline** – City of Houston wants the rehabilitation of the 54-inch sanitary sewer included in the project design, as well as the reconstruction of the manholes. Based on the current 2004 inspection the pipe is in very poor condition, including several joint offsets, warranting rehabilitation. LAN is to coordinate with the City of Houston wastewater operations group to determine the applicable rehabilitation alternatives.
5. **Waterline size reconstruction** – LAN to coordinate with the City of Houston Water Group to confirm waterline reconstruction size.
6. **Sidewalks** – The City of Houston will require a sidewalk easement from SBISD to facilitate the reconstruction of approximately 350-ft of sidewalk located on SBISD property to minimize impacts to the existing trees.
7. **Existing Trees** - Landscaping plans and tree protection plans will be necessary to comply with the City of Houston Tree Ordinance. The City of Houston will consider other TIRZ 17 projects that include proposed additional tree planting enhancements in consideration of compliance with the ordinance.
8. **Right of Way / Easement Acquisition** – TIRZ 17 to meet with the City of Houston Right of Way Group to confirm preference of right of way or easement acquisition prior to beginning acquisition efforts.
9. **Funding Agreement for Upgrades** - The City of Houston Finance Department stated the cost to rehabilitate the 54-inch sanitary sewer trunkline and manhole replacement, as well as the signal upgrades, will need to be funded by TIRZ 17.

Based on the above directives and conclusions, the engineering consultant on behalf of TIRZ 17, will proceed with final design of the Kimberley Project. Please notify Rafael Ortega, P.E. at 713-266-6900, should this summary be inconsistent with the TRC findings and decisions.

Distribution:

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