



City of Franklin

109 3rd Ave S
Franklin, TN 37064
(615)791-3217

Meeting Agenda Capital Investment Committee

Thursday, October 24, 2019

3:00 PM

Board Room

Call To Order

1. [19-1128](#) Consideration of Minutes from September 26, 2019.
2. [19-0970](#) Consideration To Deny A Request For Water And Sewer Availability For 120 Gilbert Drive (Map 106I, Parcel 10500) (CIC 09/26/19 4-0 to defer to 10/24/19; 10/24/19, 4-0; 11/21/19, 3-0).

Sponsors: Michelle Hatcher
Attachments: [map_with_sewer.pdf](#)
[120 Gilbert Drive - Sewer Availability - Form.pdf](#)

Legislative History

9/26/19	Capital Investment Committee	deferred
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3. [19-0932](#) Consideration of Change Order No. 2 to the Construction Contract (COF Contract No. 2017-0264) with Kiewit Infrastructure South, Co., for the Water Reclamation Facility Modifications and Expansion Project for a Cost Decrease of \$6,480.00 (10/24/19 CIC 4-0)

Sponsors: Michelle Hatcher and Brian Goodwin
Attachments: [Change Order No. 2 1 of 5.pdf](#)
[Change Order No. 2 2 of 5.pdf](#)
[Change Order No. 2 Part 3.1.pdf](#)
[Change Order No. 2 Part 3.2.pdf](#)
[Change Order No. 2 4 of 5.pdf](#)
[Change Order No. 2 5 of 5.pdf](#)
4. [19-1114](#) Consideration of Change Order No. 1 to the Construction Contract (COF Contract No. 2019-0093) with Civil Constructors for the Henpeck Lane Sanitary Sewer Project For An Increase In Contract Time of 16 Days (10/24/19 CIC 4-0)

Sponsors: Michelle Hatcher
Attachments: [henpeck change order #1.pdf](#)

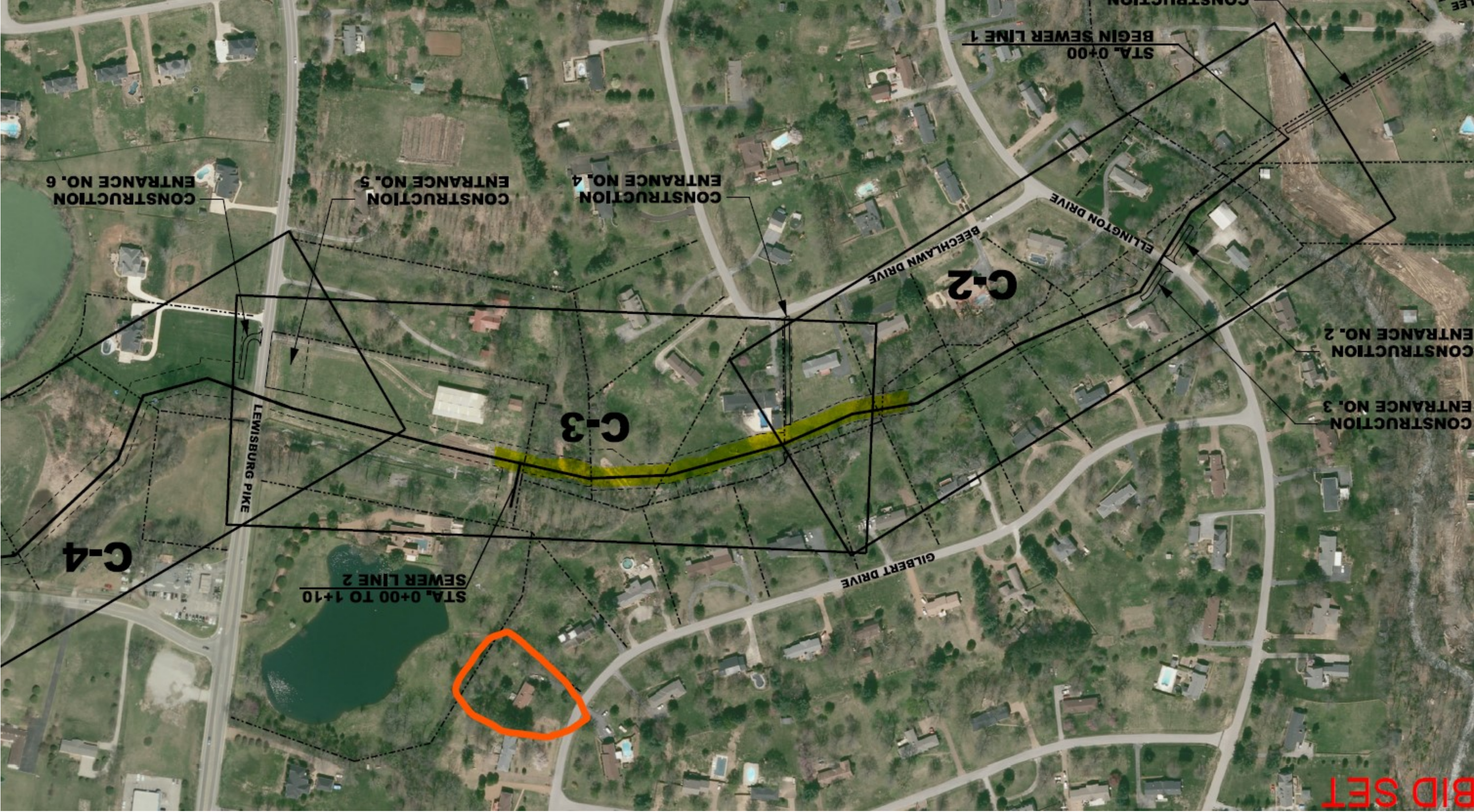
5. [19-1119](#) Consideration of the Amendment No. 1 to The Professional Services Agreement (COF Contract No. 2013-0039) with Hazen and Sawyer For The Design of South Prong Sanitary Sewer Improvements Project For An Increased Cost of \$255,000.00 (10/24/19 CIC 4-0)
- Sponsors:** Michelle Hatcher
- Attachments:** [2013-0039 Amendment No 1 PSA Hazen and Sawyer with Exhibit A.Law Appr](#)
6. [19-1127](#) Consideration of an Amendment No. 1 to the Professional Services Agreement (COF Contract No. 2018-0143) with CDM Smith, For the Water Reclamation Facility Upgrades Project Construction Services For An Increased Cost of \$39,600. (10/24/19 CIC 4-0)
- Sponsors:** Michelle Hatcher and Brian Goodwin
- Attachments:** [Contract # 2018-0143.pdf](#)
7. [19-1124](#) Discussion about Possible Landscaping of the Roundabout Central Island at East McEwen Drive & Oxford Glen Drive/Cool Springs Boulevard
- Sponsors:** Engineering
- Attachments:** [McEwen - L2-Layout1.pdf](#)
8. [19-1116](#) Consideration of DRAFT Amendment No. 2 to the Professional Services Agreement (COF Contract No. 2018-0062) with Alfred Benesch & Company for the Design of Intersection Improvements at the McEwen Drive Interchange with I-65 for a Cost Increase Not-to-Exceed \$14,345.00
- Sponsors:** Engineering
- Attachments:** [Contract 2018 0062 Amend2 Benesch McEwenI65InterchangeMods.doc](#)
[Contract 2018 0062 Amend2AttachmentA Benesch McEwenI65InterchangeI](#)
9. [19-1117](#) Consideration of a DRAFT Professional Services Agreement (COF Contract No. 2019-0317) with Alfred Benesch & Company for the Final Design of the Multi-Use Trail & Bridge at The Park at Harlinsdale Farm in an Amount Not-to-Exceed \$398,268.00
- Sponsors:** Engineering
- Attachments:** [Contract 2019-0317 PSA Benesch FinalDesign HarlinsdaleTrailBridge .docx](#)
[Contract 2019-0317 Scope Benesch FinalDesign HarlinsdaleTrailBridge .do](#)
10. [19-1118](#) Consideration of a DRAFT Professional Services Agreement (COF Contract No. 2019-0318) with CDM Smith for the Final Design of Jordan Road Improvements in a Lump Sum Amount of \$120,000.00
- Sponsors:** Engineering
- Attachments:** [Contract 2019-0318 PSA CDMSmith FinalDesign JordanRoad.docx](#)
[Contract 2019-0318 Scope CDMSmith FinalDesign JordanRoad.pdf](#)

11. [19-1121](#) Consideration of a DRAFT Professional Services Agreement (COF Contract No. 2019-0321) with KCI Technologies, Inc. for the Cool Springs Area Transportation Network Study in a Lump Sum Amount of \$290,100.00
- Sponsors:** Engineering
- Attachments:** [Contract 2019-0321 PSA KCI CoolSpringsStudy.docx](#)
[Contract 2019-0321 Scope KCI CoolSpringsStudy.docx.pdf](#)
12. [19-1122](#) Consideration of a DRAFT Professional Services Agreement (COF Contract No. 2019-0322) with Gresham Smith for Design and Post-Design Services for the SR-96 (Murfreesboro Road) Traffic Signal Improvements in a Lump Sum Amount of \$268,218.60
- Sponsors:** Engineering
- Attachments:** [Contract 2019-0322 PSA GreshamSmith SR96TrafficSignal.docx](#)
[Contract 2019-0322 Scope GreshamSmith SR96TrafficSignal.pdf](#)
13. [19-1111](#) Capital Projects Status Report for October 2019
- Sponsors:** Engineering
- Attachments:** [Capital Projects Status Report.pdf](#)
14. [19-1115](#) Water and Sanitary Sewer Project Status Update
- Sponsors:** Michelle Hatcher
- Attachments:** [October 2019 CIC Status.docx](#)

Other Business

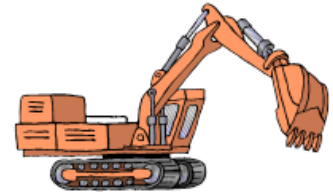
Adjournment

ANYONE REQUESTING ACCOMMODATIONS DUE TO DISABILITIES SHOULD CONTACT A.D.A. COORDINATOR, AT 791-3277 AT LEAST 10 DAYS PRIOR TO THE MEETING, IF POSSIBLE.



MEMO

TO: Applicant
FROM: Water Management Department
DATE: May 2018
RE: Request for Water and/or Sewer Availability & Associated Costs



When considering development of a tract of land, one of the first steps a developer (or their design professional) should complete is the application for water and sewer availability. **Planned Unit Developments MUST have approved availability to be approved.**

The following items **SHALL** be included with a water and/or sewer availability request:

- Completed Application (ALL sections must be filled in)
- Project location map & Utility Plan (if available)
- Sewage Calculations (For Development projects only; Individual Single Family Homes are not required to submit these calculations).

Email Application to: availability@franklinton.gov

For additional information or questions please call: 615-794-4554

There is a 30 day maximum turnaround time for the requests. Unless your request requires Board of Mayor & Aldermen (BOMA) approval then applicant will be notified of the date of the BOMA meeting at which your request will be brought up.

THE AVAILABILITY IS GRANTED BASED ON THE FOLLOWING TIME PERIODS:

- Construction plans are to be prepared and **submitted within one year from the granting of availability.**
- Construction of the water and sanitary sewer **improvements shall begin within one and one-half (1 ½) years from the granting of availability.**

OTHER RELATED INFORMATION:

- Pump stations and force mains are not allowed if the development can be served by extension of gravity sewer.
 - Any necessary Pump Station or Force Main shall be subject to approval by Water Dept. Director.
- **No customer shall supply water service to more than one dwelling or premise from a single service line.**

PROPERTIES OUTSIDE OF CITY LIMITS:

Per **Resolution 2015-32**: Annexation shall be required as a condition of approval for all properties outside the City Limits whether within the City's Urban Growth Boundary, or not, in order to be granted sanitary sewer availability. Annexation shall occur at such time the property becomes contiguous to the City's corporate limits or as determined by the Board of Mayor and Alderman.

- Applicant shall be required to sign the Annexation Agreement **after** Availability Request is approved by BOMA, and **before** the approved letter is issued.

SINGLE FAMILY APPLICANTS:

- Not all portions of the application will apply, please mark NA to those sections.
- If a main line extension is necessary you will be required to submit a plan & profile set for review and approval.

MAIN LINE EXTENSION REQUIRED FOR SERVICE:

Plans shall be submitted for approval:

- Plans shall include: Site Layout & Location, Existing Utilities, Grading & EPSC, Plan & Profile, and Applicable Details.
- Include Final hydraulic analysis of the line/s. Use the City's standards for flow calculations.
- Water and Sewer Specifications are available on-line (in pdf form) for the convenience of the developer's engineer:
<http://www.franklinton.gov/government/engineering/development>

CURRENT SEPTIC SYSTEMS/APPLICANTS WITHIN THE COUNTY:

- Williamson County requires residents wishing to modify the septic system to first request availability with the City. You are required to complete the application and indicate whether you are requesting a denial or approval. (Indication does not guarantee final decision. BOMA must approve or deny your request).
- Septic System must be decommissioned per County standards:
<http://www.williamsoncounty-tn.gov/index.aspx?NID=126>

If you have any questions concerning this request, contact the City of Franklin Water Department at (615) 794-4554.

Tap Related Fees* *Does not include \$25 New Account Set up Fee*

Fee Description:	Applicable Utility	Fee Amount:
System Development Fee (SDF)	Water & Sewer	See Charts Below (based on meter size)
Access Fee	Water & Sewer	See Charts Below (based on meter size)
Effluent Disposal Fee (EDF)	Sewer	See Charts Below (based on meter size)
Tap Fee	Water & Sewer	See Charts Below (based on meter size)
Irrigation Fee	Water & Reclaim Water	See Charts Below (based on meter size)
Fire Sprinkler Fee (SDF)	Water (fire)	\$500 per diameter inch of connection line

Effective March 1, 2008, the fees and installation costs are as follows and are paid to the Building & Neighborhood Services Dept. 615-794-7012

WATER * City of Franklin Wat							
Meter Size	SFUE	GPM	SDF	Access Fees	Irrigation Meter ¹	Tap Existing ²	City making Tap ³
¾"	1	12.5	\$903	\$1,186	\$3,150	\$315	\$756
1"	13	50	\$3,612	\$4,746	\$4,725	\$374	\$897
1 ½"	30	120	\$8,619	\$11,390	\$6,300	\$656	\$1,444
2"	40	160	\$11,558	\$15,187	\$7,875	\$1,362	\$2,223
3"	88	350	\$25,284	\$33,222	\$9,450	\$1,581	\$3,654
4"	125	500	\$36,120	\$47,460	\$11,025	\$2,668	\$5,492
6"	300	1200	\$86,688	\$113,904	\$12,600	\$4,723	\$7,387
8"	375	1500	\$108,360	\$142,380	\$14,175	\$10,293	\$14,110

SEWER (Fees are based on water meter size regardless of water district)							
Meter Size	SFUE	GPM	SDF	Access Fee	Effluent Disposal ⁴	Tap Existing ²	City Making Tap ³
¾"	1	12.5	\$1,444	\$2,100	\$450	\$263	\$1,240
1"	13	50	\$5,775	\$8,400	\$1,800	\$263	\$1,240
1 ½"	30	120	\$13,860	\$20,160	\$4,320	\$263	\$1,240
2"	40	160	\$18,480	\$26,880	\$5,760	\$263	\$1,240
3"	88	350	\$40,425	\$58,800	\$12,600	\$263	\$1,240
4"	125	500	\$57,750	\$84,000	\$18,000	\$263	\$1,240
6"	300	1200	\$138,600	\$201,600	\$43,200	\$263	\$1,240
8"	375	1500	\$173,250	\$252,000	\$54,000	\$263	\$1,240

1- Irrigation Fees Include Meter Fee & \$25 Application Fee Only

3- City Installs Tap & Meter

2- Contractor Installs Tap & Meter – Subject to Addnl' Inspections

4- Fee Goes to Establishing Effluent Water System; paid with all Sewer Services

*** All Fees shall be paid prior to the issuance of a Building Permit or Utility Inspection, whichever occurs first. ***

Private Fire Hydrant and Sprinkler Systems – The SDF for connection of private fire hydrants and sprinkler system lines to the City of Franklin's (COF) lines shall be **\$500 per inch diameter of connection** to the City's lines. Radio-read meters will be required on all private fire hydrant and sprinkler systems.

UTILITY PERMIT RELATED FEES: **PAID WITH PERMIT, NOT WITH AVAILABILITY REQUEST:**

Only applicable if extending the water, sewer or reclaim water main lines.

Fee Description	Applicable Utility	Fee Amount
Plan Review Fee	Water, Sewer & Reclaim Water	\$300 Water; \$300 Sewer & \$300 reclaim Water
Inspection fees:	Fee Rate	
Water Main Line	\$1.25/LF Water (minimum \$ 1,000)	
Sewer Gravity Main Line	\$2.00/LF (minimum \$1,000)	
Sewer Force Main Line	\$1.50/LF (minimum \$1,000)	
Reclaim Water	\$1.25/LF (minimum \$1,000)	

Checks are made payable to the City of Franklin. Please indicate what the payment is for on the check.

3 Projected Flow Examples

Drainage Facility	Flow in GPD	Design Units
Apartments -One Bedroom	250	per unit
Apartment -Two Bedroom	300	per unit
Apartment -Three Bedroom	350	per unit
Mobile Home Parks	300	per mobile home space
Single Family Dwelling	350	per unit
Assembly Hall (No Food Service)	2	per seat
Beauty Shop, Styling Salon	200	per station
Bowling Alleys (no food service)	75	per lane
Car Wash -(stand alone)	500	Per bay
Child Care Center	10	Per child and adult
Churches (small)	5	per sanctuary seat
Churches (large with kitchen)	7	per sanctuary seat
Country Clubs	50	per member
Dance Halls (No Food Service)	2	per person
Doctors/Dentists	75	per doctor
	20	per employee
	10	per patient
Drive-In Theaters	5	per car space
Factories (no showers)	25	per employee per 8-hour shift
Factories (with showers)	35	per employee -per 8-hour shift
Hospitals (no residents) (with food service)	300	per bed
Hotels	130	per unit
Institutions (residents) (with food service)	100	per person
Laundries (coin-operated)	400	per standard size machine
Nursing and Rest Homes (with food service)	200	per patient
	100	per resident employee
	50	per non-resident employee
Office Buildings	25	per employee
Office/warehouse space	0.1	per square foot
Retail Store	20	per employee
Restaurant -Ordinary (not 24-hour)	35	per seat
Restaurant -24-Hour	50	per seat
Restaurant -Banquet Rooms	5	per seat
Restaurant -Along Freeway	100	per seat
Restaurant -Tavern (very little food service)	35	per seat
Restaurant -Curb Service (drive-in)	50	per car space
Service Stations	1000	Per fuel island
Schools -Elementary (with food service)	15	per pupil
Schools -High and Junior High (with food service)	20	per pupil
Shopping Centers (no food service or laundries)	0.2	per sq. ft of floor space
Swimming Pool	10	per swimmer
Theaters, auditorium type	5	per seat
Youth and Recreation Camps (w/food service)	50	per person

REQUEST FOR CONSTRUCTION CONTRACT CHANGE CHANGE ORDER NO. 2

City of Franklin
Engineering Office
109 Third Avenue South
Franklin, Tn 37064

Contract Number: 2017-0264
Project Name: Water Reclamation Facility
Modifications & Expansion

Background

The Board of Mayor and Alderman passed a resolution to award a contract on July 10, 2018 for the Franklin Water Reclamation Facility Modifications and Expansion Project to Kiewit Infrastructure South Co., (Kiewit), contingent upon approval by the State Revolving Fund (SRF) Program, which was received on August 23, 2018. The amount of the contract entered into by the City of Franklin and Kiewit was for \$132,890,000.00 (which included an Owner contingency of \$4,000,000). A substantial completion date of February 20, 2022, and a final completion date of May 26, 2022 were requirements in the contract.

The Franklin Water Reclamation Facility Modifications and Expansion Project included, among other scope, construction of a new headworks facility, an equalization basin, odor control systems, two ultraviolet disinfection systems, an alum storage and feed system, an electrical building, modifications to the biological nutrient removal facilities, the reclaimed water pump station, return sludge pump station and RAS/WAS pump station, construction of a new solids treatment system, upgrades to the instrumentation and control system, installation of new yard piping and demolition.

Reason for Change Order:

During the course of the project to date, the need for various changes to Kiewit's scope became apparent to include work not captured in the original contract, changes due to alternate items of equipment proposed by Kiewit, or to realize savings to the City of Franklin. Those changes were memorialized in Construction Change Authorizations (CCAs) or responses to Requests for Proposal (RFPs) as shown on Attachment A. The specific language of the scope changes is detailed in the CCA/RFP documents

Attachments (List documents supporting change):

Attachment A – CCA/RFP Summary Sheet
RFP1 Contractor Proposal
CCA 1 w/Contractor Proposal
CCA 2 w/Contractor Proposal
CCA 3 w/Contractor Proposal
CCA 4 w/Contractor Proposal
CCA 5 w/Contractor Proposal
CCA 8 w/Contractor Proposal
CCA 14 w/Contractor Proposal
CCA 15 w/Contractor Proposal
CCA 16 w/Contractor Proposal

CHANGE IN CONTRACT PRICE:	
Original Contract Price:	\$132,890,000.00
Net Increase in Contract Price From Previous Change Orders:	\$180,565.00
Contract Price Prior to This Change Order:	\$133,070,565
Net Increase or <Decrease> of This Change Order:	(\$6,480.00)
Contract Price with All Approved Change Orders:	\$133,064,085.00

CHANGE IN CONTRACT TIMES	
Original Contract Times	
Substantial Completion Date	2/20/2022
Final Completion Date	5/26/2022
Net Change From Previous Change Orders	
Substantial Completion	0 Days
Final Completion	0 Days
Contract Times Prior to This Change	
Substantial Completion Date	2/20/2022
Final Completion Date	5/26/2022
Increase in Time This Change Order	
Substantial Completion	-0- Days
Final Completion	-0- Days
Contract Times with All Approved Change Orders	
Substantial Completion Date	2/20/2022
Final Completion Date	5/26/2022

Now, Therefore, Kiewit Infrastructure South Co., hereby agrees to this Change Order, consisting of the above mentioned schedule changes, and agrees that this Change Order is hereby made a part of the original contract and will be performed by this Contractor in accordance with specifications thereof, and that the original contract remains in full force and effect, except in so far as specifically modified by this Change Order.

RECOMMENDED FOR APPROVAL BY:

ENGINEER

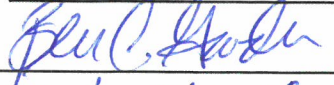
Name: Daniel A. Harris

Signature: 

Date: 9/5/19

CITY PROJECT MANAGER

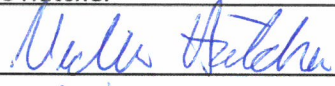
Name: Brian Goodwin

Signature: 

Date: 10/25/2019

CITY WATER MANAGEMENT DIRECTOR

Name: Michelle Hatcher

Signature: 

Date: 11/11/19

ACCEPTED BY CONTRACTOR:

Name: Chris Tenneyson

Title: Proj. Mgr.

Signature: 

Date: 11/11/19

APPROVED BY OWNER:

Name: Eric S. Stuckey

Title: City Administrator

Signature: _____

Date: _____

Attachment A

CCA/RFP Summary

CCA Number	RFP Number	Description	Cost	Time Extension	Date Sent to SRF for Review	Date Approved by SRF
	1	Lead based paint/asbestos containing material remediation	\$9,450.00	0		
1		Escalation for pre-selected items	\$ 89,893.00	0	4/25/2019	4/30/2019
2		Reissued site/civil drawings to reflect City SWPPP review comments	\$0.00	0	8/29/2019	9/3/2019
3		Revised stair/beam configuration	\$0.00	0	8/29/2019	9/3/2019
4		Reissued Electrical Building structural drawings to clarify drafting discrepancy	\$0.00	0	3/8/2019	3/8/2019
5		Construct berms in lieu of removing excess spoils	(\$80,000.00)	0	3/6/2019	3/6/2019
8		Provide power circuitry to WAS pump motor heaters	\$3,206.00	0	8/29/2019	9/3/2019
14		Battery powered in lieu of AC powered autolubrication equipment	(\$5,031.00)	0	8/29/2019	9/3/2019
15		Single wall in lieu of double wall alum tanks	(\$19,572.00)	0	8/29/2019	9/3/2019
16		Delete redundant mixing valve SP-MXV-1	(\$4,426.00)	0	7/18/2019	7/29/2019
Total Change			(\$6,480.00)			
Owner's Contingency Amount			\$4,000,000.00			
Remaining Owner's Contingency			\$4,000,000.00			
Total Time Extension (Calendar Days)				0		



Kiewit

Kiewit Infrastructure South Co.
4405 International Blvd., NW, Suite C-101
Norcross, GA 30093

April 18, 2019

To: Attn: Mr. Dan Harris

LET-KIEWIT-00015.00

CDM Smith, Inc.
210 25th Avenue North
Suite 1102
Nashville, TN 37203

Reference: Franklin WRF Modifications & Expansion Project
COF Contract No. 2017-0264

Subject: Asbestos Remediatoin

Dear Mr. Harris,

This letter is in response to CDM Smith's letter dated January 18, 2019 requesting a proposal for remediation and removal of lead based paint and asbestos containing materials identified as part of Phase I and II Pre-Demolition Hazardous Materials Assessment.

Kiewit proposes to complete the remediation and removal of lead based paint and asbestos containing materials identified in the Phase I and II Pre-Demolition Hazardous Materials Assessment for a total price of **Nine Thousand Four Hundred Fifty Dollars (\$9,450)**.

If you have any questions, please do not hesitate to contact me at (678) 794-2121.

Sincerely,

Steve Davis
Project Manager

cc: File
Michelle Hatcher



Quote Submitted to:

Kyle D. Krajco

General Superintendent

KIEWIT WATER FACILITIES SOUTH CO.

City of Franklin Waste Water

135 Claude Yates Dr. Franklin, TN 37064

Cell: 608-628-2561

kyle.krajco@kiewit.com

kyle.krajco@ibberson.com

Date: 12/19/2018

Job # 17-0342A

We hereby submit our Proposal for: Franklin WRF Rev

Demolition Pricing:

Phase 1 Abatement		\$	9,000.00
		Total \$	9,000.00

Abatement

- Obtain permits
- Remove 300 In ft of window seal
- Remove 300 In ft of door seal
- Remove 70 sq ft of roofing material
- Provide manifests and documentation

We will complete all work as specified above (weather permitting) upon receipt of duly signed agreement and/or notice that the owner is ready for work to commence on the job. We are adequately covered with Public Liability, Property Damage and Workman's Compensation Insurance. **LIC#00058732**

We will furnish all labor, materials, machinery, equipment and services, and perform and complete the work as specified above for the consideration of all **salvageable materials** on the premises, with the exceptions as noted above. Terms are Net 30 days.

Upon completion of the project as specified above, interest charges will be added at 1.5% per month on past due invoices. In the event collection of any amount due hereunder is placed in the hands of an attorney for collection, or in the event it becomes necessary for Demo Plus, Inc. to bring legal action to enforce any provision of this agreement, the undersigned agrees to pay to Demo Plus, Inc., in addition to all other relief to which Demo Plus, Inc. may be entitled, all costs and expenses of such collection or enforcement including, but not limited to, reasonable attorney's fees, and all such relief shall be cumulative.

BY: Chase Huffstutler

Eric Sloan *Project Manager/Estimator*

Phone: 615.620.3366 (ext.)210 **Mobile:** 615.293.5534 **Fax:** 615.620.3375

Email: chaseh@demoplusinc.com

NOTE: This proposal may be withdrawn by us if not accepted within 30 (thirty) days.

ACCEPTANCE OF PROPOSAL

CONSTRUCTION CHANGE AUTHORIZATION

TO: Mr. Steve Davis
Project Manager
Kiewit Water Facilities South
4405 International Blvd., NW,
Suite C-101
Norcross, Georgia 30093
(770) 940-8044

FROM: CDM Smith
3715 Northside Parkway NW
Building 300, Suite 400
Atlanta, GA 30327
(404) 720-1400

DATE: December 6, 2018

PROJECT: City of Franklin, Tennessee
Franklin WRF Modifications & Expansion Project

CCA NUMBER: 001 **CDM SMITH PROJ. NO.:** 14915-231666

SUBJECT: Escalation of Certain Bid Prices **CITY PROJECT NO.:** 2017-0264

REFERENCE: N/A

DESCRIPTION:

The contract scope, conditions and prices were pre-negotiated for the UV Disinfection System equipment and vendor services, the Thermal Hydrolysis Pretreatment equipment and vendor services, and the retrofitting of the existing Gorman Rupp T3 scum pumps. The pre-selection agreements for those items included clauses to escalate negotiated prices from the quote dates to the bid advertisement dates. The prices inserted in the bid form at the time of bid were inflated to September 2017, the bid advertisement date for the original bid, but were not escalated again when the project was rebid. The purpose of this Construction Change Authorization is to escalate the prices to April 2018, the bid advertisement date for the rebid.

The calculations to arrive at the escalated prices assuming a bid advertisement date of April 2018 are presented on the attached calculation sheet. The escalated prices are compared against the prices that were inserted in the bid sheet in Table 1 below.

Table 1
Escalation of Certain Bid Prices to April 2018

Bid Item	Description	Bid Sheet Amount	Price Escalated to February 2018	Construction Change Authorization Amount
12	Retrofit of existing scum pumps	\$8,869	\$9,048	\$179
18	Pre-negotiated ultraviolet (UV) disinfection system and services	\$806,353	\$822,640	\$16,288
27	Pre-negotiated thermal hydrolysis pretreatment (THP) system and services.	\$3,232,721	\$3,294,500	\$61,779
Total				\$78,245

The total amount for each of the associated bid items shall increase by the amount in the right-hand column of the Table 1. Measurement and payment terms shall remain consistent with those established in the contract documents.

ATTACHMENTS: Escalation Calculations

CDM SMITH:

By: 

Date: 12/7/18

CONTRACTOR

By: 

Date: 12/21/2018

City of Franklin:

By: 

Date: 12/7/18

City of Franklin, Tennessee
Franklin WRF Modifications & Expansion Project
Escalation of Pre-Negotiated Item Pricing - Re-Bid

Bid Advertisement Date 4/8/2018

Release Dates for PPI Detailed Reports

April 2018

Link to PPI Detailed Reports Web Page:

5/9/2018 <--- was not available as of Bid Advertisement Date
https://www.bls.gov/psi/ppi_dr.htm

Bid Item C: Pre-Negotiated Ultraviolet (UV) Disinfection System and services as supplied by TrojanUV

Base Selling Price	\$ 750,700	Due Date for UV Proposals
Base Selling Price valid as of	6/28/2013	ref: June 2013 PPI Finished Goods Less Foods and Energy (Not Seasonally Adjusted)
PPI as of Due Date for UV Proposals	184.7	ref: April 2018 PPI Finished Goods Less Foods and Energy (Not Seasonally Adjusted)
PPI as of Bid Advertisement Date (April 2018)	202.4	
Adjusted Selling Price	\$ 822,640	

Bid Item D: Pre-Negotiated Thermal Hydrolysis Pretreatment (THP) System and services as supplied by Cambi, Inc.

Base Selling Price	\$ 3,091,035	*Does not include Optional One Year Service Contract, Does include 60 day operator shadowing.
Base Selling Price valid as of	10/31/2014	
PPI as of 10/31/2014	189.9	ref: October 2014 PPI Finished Goods Less Foods and Energy (Not Seasonally Adjusted)
PPI as of Bid Advertisement Date (April 2018)	202.4	ref: April 2018 PPI Finished Goods Less Foods and Energy (Not Seasonally Adjusted)
Adjusted Selling Price	\$ 3,294,500	

Bid Item F: Parts and service provided by Southern Sales Company to change the speed of two sets of two (2) existing Gorman Rupp T3 scum pumps [See Appendix E and Drawings M-48 and M-49]

Base Selling Price	\$ 8,775	Date of Southern Sales Company Quote No. 13342BF
Base Selling Price valid as of	10/7/2016	ref: October 2016 PPI Finished Goods Less Foods and Energy (Not Seasonally Adjusted)
PPI as of October 7, 2016	196.3	ref: April 2018 PPI Finished Goods Less Foods and Energy (Not Seasonally Adjusted)
PPI as of Bid Advertisement Date (April 2018)	202.4	
Adjusted Selling Price	\$ 9,048	

Notes:

PPI = Producer Price Index for Finished Goods Less Foods and Energy, not seasonally adjusted.

PPI for Capital Equipment was available at the time the method of cost escalation was written, but categories changed in January 2014 when the BLS changed from the Stage of Processing (SOP) aggregation system to the Final Demand-Intermediate Demand (FD-ID) system. The Method of Cost Escalation allows the PPI for Finished Goods Less Foods and Energy, not seasonally adjusted, to be used in the event that the PPI for Capital Equipment is not available.



Kiewit

Kiewit Infrastructure South Co.
4405 International Blvd., NW, Suite C-101
Norcross, GA 30093

February 7, 2019

To: Attn: Mr. Dan Harris

GC-KIEWIT-00008.00

CDM Smith, Inc.
210 25th Avenue North
Suite 1102
Nashville, TN 37203

Reference: Franklin WRF Modifications & Expansion Project
COF Contract No. 2017-0264

Subject: Escalation of Certain Bid Items

Dear Mr. Harris,

This letter is in response to CDM Smith's letter dated December 6, 2018 regarding escalation of certain bid items. That letter defined the escalation for the pre-negotiated contract scope, conditions, and prices for the UV Disinfection System equipment and vendor services, the Thermal Hydrolysis Pretreatment (THP) equipment and vendor services, and the retrofitting of the existing Gorman Rupp T3 scum pumps. Table 1 in the above referenced letter outlined a total construction change authorization amount of **Seventy-Eight Thousand Two Hundred Forty-Six Dollars (\$78,246)**.

After conversations with CDM Smith it was agreed that a Fifteen Percent (15%) markup to this construction change authorization is applicable per Article 12 – *Change of Contract Price; Change of Contract Times* of the General Conditions (Section 00700). The total amount of this construction change authorization will be **Eighty-Nine Thousand Nine Hundred Eighty-Three Dollars (\$89,983)**.

If you have any questions, please do not hesitate to contact me at (678) 794-2121.

Sincerely,

Steve Davis
Project Manager

cc: File
Michelle Hatcher

PREPARED BY: Michael Sheston

Page 1 of 1

CONSTRUCTION CHANGE AUTHORIZATION

TO:	Mr. Steve Davis Project Manager Kiewit Water Facilities South 4405 International Blvd., NW, Suite C-101 Norcross, Georgia 30093 (770) 940-8044	FROM:	CDM Smith 3715 Northside Parkway NW Building 300, Suite 400 Atlanta, GA 30327 (404) 720-1400
DATE:	December 12, 2018		
PROJECT:	City of Franklin, Tennessee Franklin WRF Modifications & Expansion Project		
CCA NUMBER:	002	CDM SMITH PROJ. NO.:	14915-231666
SUBJECT:	Reissuance of Select Civil Drawings and Final SWPPP	CITY PROJECT NO.:	2017-0264
REFERENCE:	N/A		

DESCRIPTION:

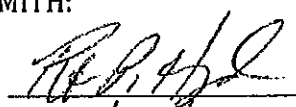
In working through the final details of the stormwater and erosion and sedimentation control design for the site with the City's Engineering Department, a few modifications had to be made to the civil drawings to satisfy their requirements. The modified drawings (C-32, C-42A, C-42B, C-42C, C-43A, C-43B, C-43C, and CD-9) are reissued as part of this construction change authorization (CCA). The changes, which are clouded, focus on more clearly delineating conservation areas to ensure they are not disturbed during construction and addition of a sediment trap in Pond 2. There are also modifications to the tables in the sediment pond detail to provide more detail.

In addition to the design drawing modifications, a few changes had to be made to the drawings in the SWPPP as well. The changes to the drawings in the SWPPP are either expansion on previous site information or the same as the changes to the contract drawings.

No change in cost or schedule is authorized by this CCA. However, if the Contractor believes the changes identified in this CCA will result in a change in cost he shall produce a detailed estimate of the additional cost for consideration.

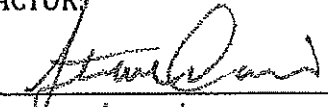
ATTACHMENTS:

CDM SMITH:

By: 

Date: 12/12/2018

CONTRACTOR:

By: 

Date: 2/25/2019

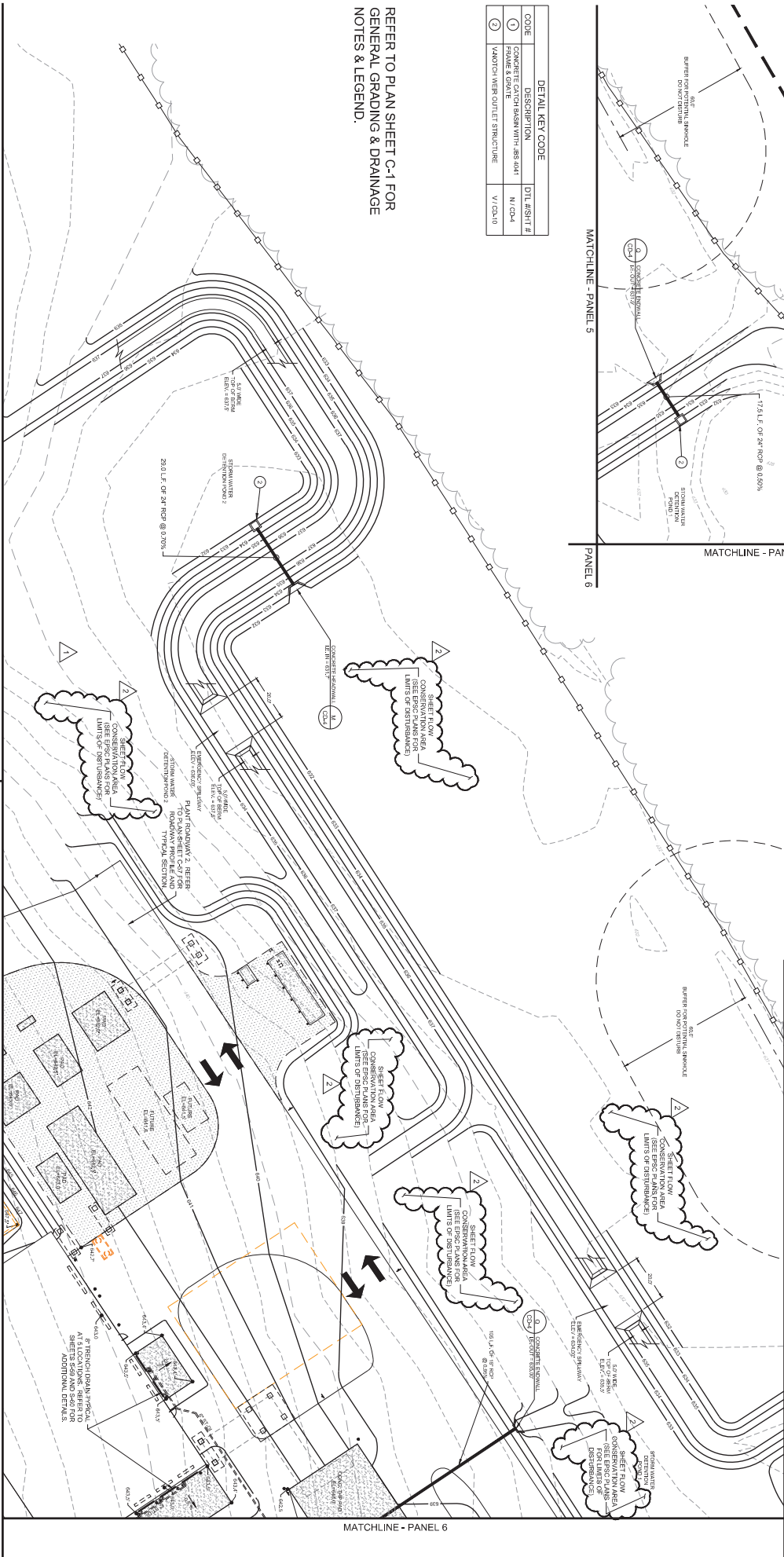
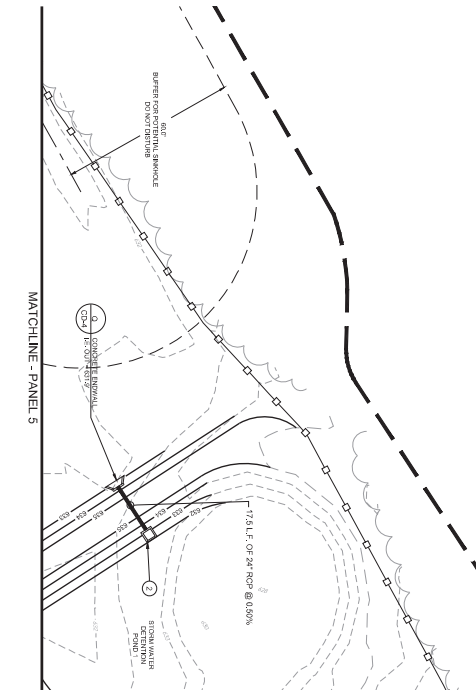
City of Franklin:

By: 

Date: 12/12/2018

DETAIL KEY CODE		
CODE	DESCRIPTION	DTL #/SHT #
①	CONCRETE CATCH BASIN WITH JBS 4041 FRAME & GRATE	N / CD-4
②	WATCH WEIR OUTLET STRUCTURE	V / CD-10

REFER TO PLAN SHEET C-1 FOR
GENERAL GRADING & DRAINAGE
NOTES & LEGEND.

[illegible]

CDM

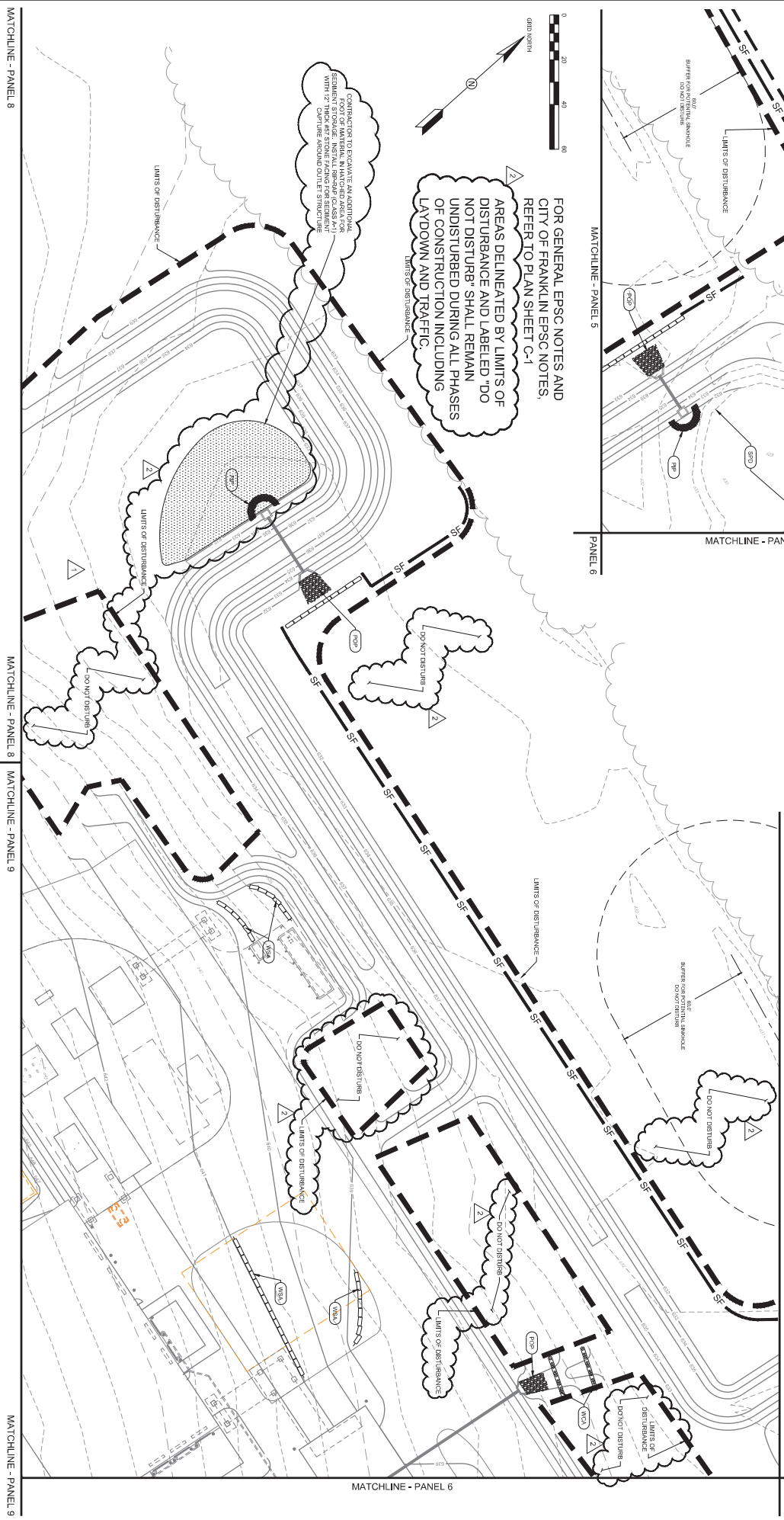
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CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COF CONTRACT NO. 2017-0264

GRADING AND DRAINAGE PLAN
PANEL 5

PROJECT NO.	14915-98694-WR0
FILE NAME:	Cof_WRF_CW
SHEET NO.	C-32

DESIGNED BY	TLU	CDM Smith	CDM Smith	CITY OF FRANKLIN, TENNESSEE WATER RECLAMATION FACILITY MODIFICATIONS AND EXPANSION PROJECT COP CONTRACT NO. 2017-0264	EROSION PREVENTION & SEDIMENT CONTROL PLAN PANEL 5 - INTERIM PHASE	PROJECT NO. 17-0264-05 SHEET NO. C-42B
CONSTRUCTION PHASE AUTHORIZATION	TLU	CDM Smith	CDM Smith			
CONSTRUCTION DRAWING	TLU	CDM Smith	CDM Smith			
REVISION FOR BID CHANGES	TLU	CDM Smith	CDM Smith			
DATE	04/04/2018	DATE	04/04/2018			
DATE	04/04/2018	DATE	04/04/2018			
DATE	04/04/2018	DATE	04/04/2018			



CODE	DESCRIPTION	DTL # / SHT #
ESF	ADVANCED SILT FENCE SEDIMENT BARRIER	A / CD-1
CSF	CURB COMBINATION INLET PROTECTION	T / CD-6
APF	AREA INLET PROTECTION (BLOCK & STONE)	D / CD-1
AMP	AREA INLET PROTECTION (STRAWED WATERFURROWS)	I / CD-1
CB	CATCH BASIN INLET	K / CD-1
PIF	PREFORMED INLET PROTECTION	F / CD-1

CODE	DESCRIPTION	M / CD-2
SPF	BLANKET / MATING SLOPE PROTECTION	G / CD-1
CSF	BLANKET / MATING CHANNEL PROTECTION	J / CD-1
SCD	STONE CHECK DAM	E / CD-1
SFF	STONE FILTER BERM	R / CD-1
WCD	WATTLE / FIBER CHANNEL APPLICATION	O / CD-2
WCD	WATTLE / FIBER BERM APPLICATION	N / CD-2
STP	SEDIMENT TRAP	L / CD-2

CODE	DESCRIPTION	B / CD-1
WLS	WOOD LEVEL SPREADER	C / CD-1
WLS	CONCRETE WASHOUT	S / CD-2
SPF	SEDIMENT POND	O / CD-2
WLS	STRAW MULCH @ 3 TONS PER ACRE	N/A
WLS	TEMPORARY SEEDING	N/A
WLS	PERMANENT SEEDING	N/A

MATCHLINE - SEE INSET LEFT

PANEL 3



SC2	PAVILION CONSTRUCTION EXIT	B / CD-1
NMS	WOOD LEVER SPREADER	C / CD-1
GRN2	CONCRETE WASHOUT	S / CD-9
SP2	SEDIMENT POND	O / CD-9
MLL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TRD	TEMPORARY SEEDING	N/A
TRD2	PERMANENT SEEDING	N/A

△	1-2020	SP	CONSTRUCTION CHANGE AUTHORIZATION	CREATED BY: _____	TL
△	419	TLH	CONSTRUCTION DRAWING	CREATED BY: _____	TL
△	419	SP	REBIDDED FOR BIDD CHANGES	CREATED BY: _____	SP
REVISION DATE	BY	REVISIONS		CREATED BY: _____	TL
				DATE: _____	APRIL 2011

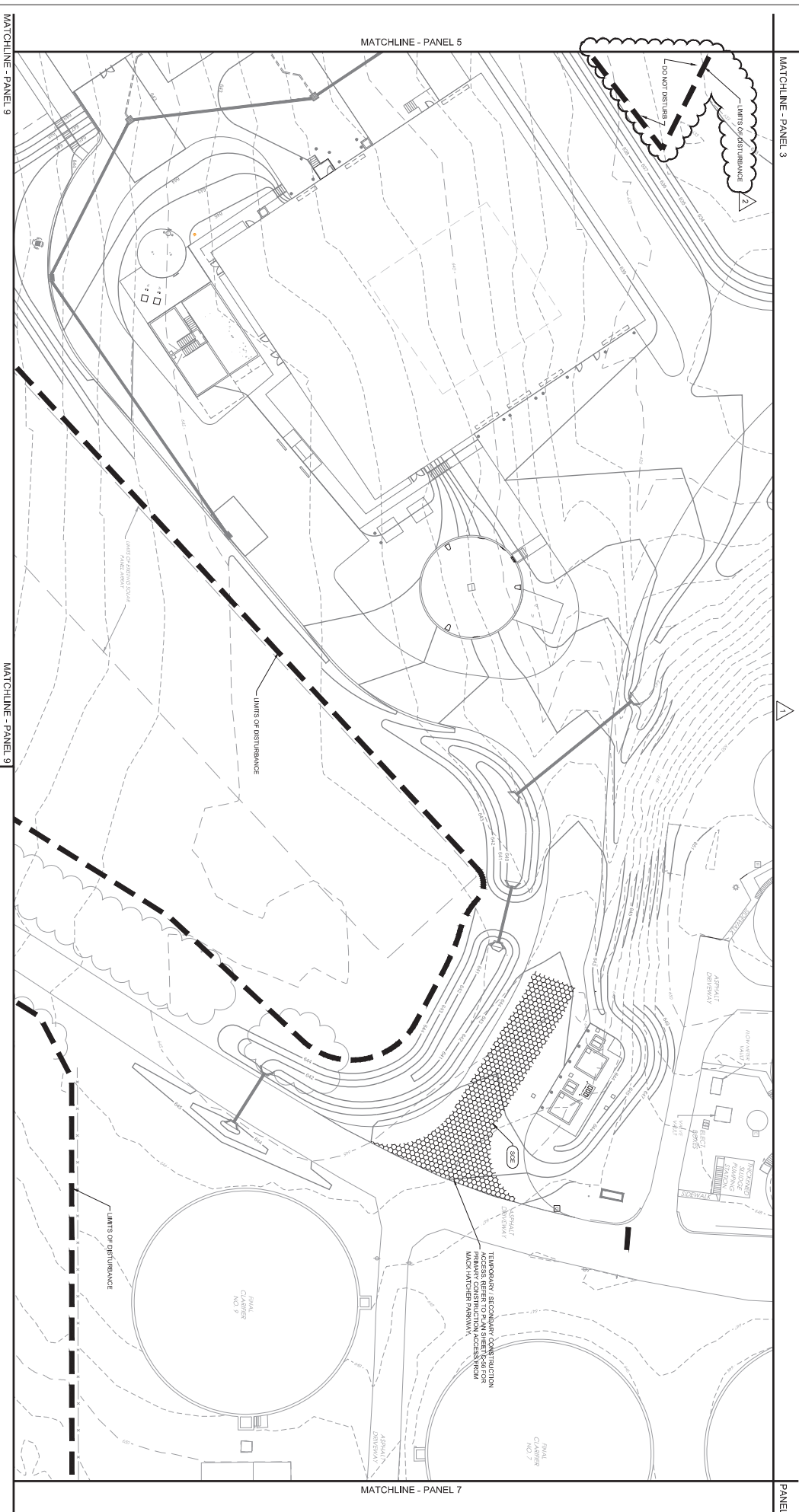
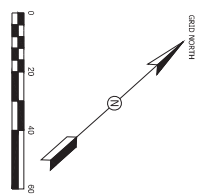
EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DTL # / SHT #
ESR	ENHANCED SIL FENCE SEDIMENT BARRIER	A / CD-1
QRP	QURB (COMBINATION) INLET PROTECTION	T / CD-10
APR	AREA INLET PROTECTION (BLKCS & STONE)	1 / CD-1
WPP	AREA INLET PROTECTION (STAKED WATTLEBARK)	1 / CD-1
CBP	CATCH BASIN BARRIER	K / CD-1
PIP	PIPE COLLECT INLET PROTECTION	F / CD-1

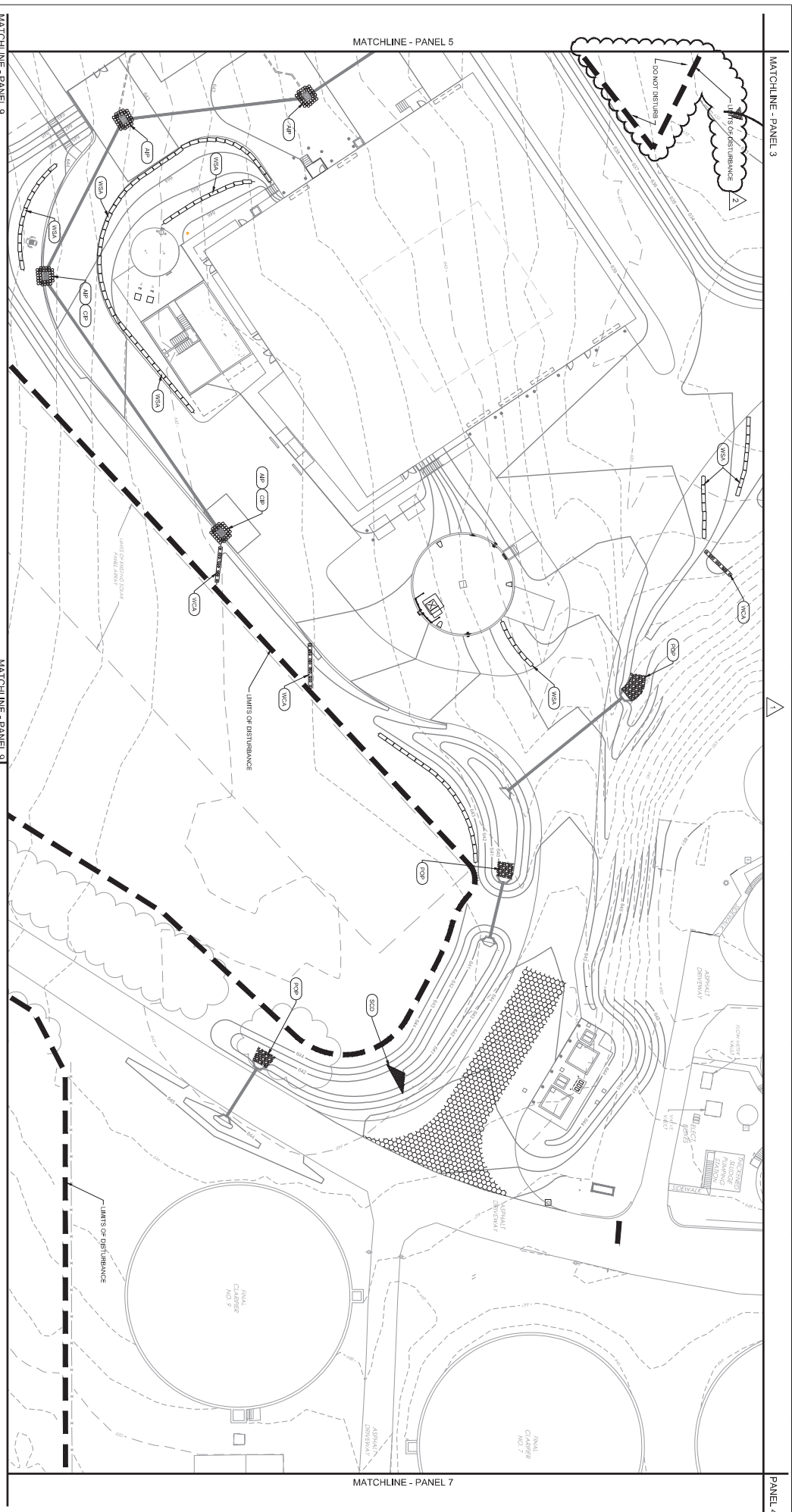
POP	PIPE OUTLET PROTECTION (PIB-AP)	M / CD2
ESP	BANKET / MATINGS SLOPE PROTECTION	G / CD1
SPD	BANKET / MATINGS CHANNEL PROTECTION	J / CD4
SCD	STONE CHECK DAM	E / CD4
SRB	STONE FILTER BED	R / CD4
MCB	MATITE / MORE CHANNEL APPLICATION	O / CD2
MBA	MATITE / MORE SLOPE APPLICATION	N / CD2
STP	SEWIDENT TRAP	L / CD2

SCF	STABILIZED CONSTRUCTION EXIT	B / C/D-I
NL3	WOOD LEVEL SPREADER	C / C/D-I
CMO	CONCRETE MASH-OUT	S / C/D-I
SPD	SEEDMENT POND	C / C/D-I
NUL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TSO	TEMPORARY SEEDING	N/A
TSU	PERMANENT SEEDING	N/A

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COF CONTRACT NO. 2017-0264

AREAS DELINEATED BY LIMITS OF DISTURBANCE AND LABELED "DO NOT DISTURB" SHALL REMAIN UNDISTURBED DURING ALL PHASES OF CONSTRUCTION INCLUDING LAYDOWN AND TRAFFIC.



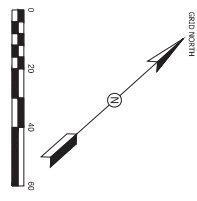


EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DIT # / SHT #
ERB	ENHANCED SILT FENCE SEDIMENT BARRIER	A / CD-1
CRB	CRIB COMBINATION SILT PROTECTION	T / CD-10
RRB	ROCK NET PROTECTION (MUSKIE STONE)	D / CD-1
WRB	WALL MAT PROTECTION (BENT WATTLE/UBI)	I / CD-1
CBP	CATCH BASIN SILENT	K / CD-1
RRP	RIPRAP CALVERNET PROTECTION	F / CD-1

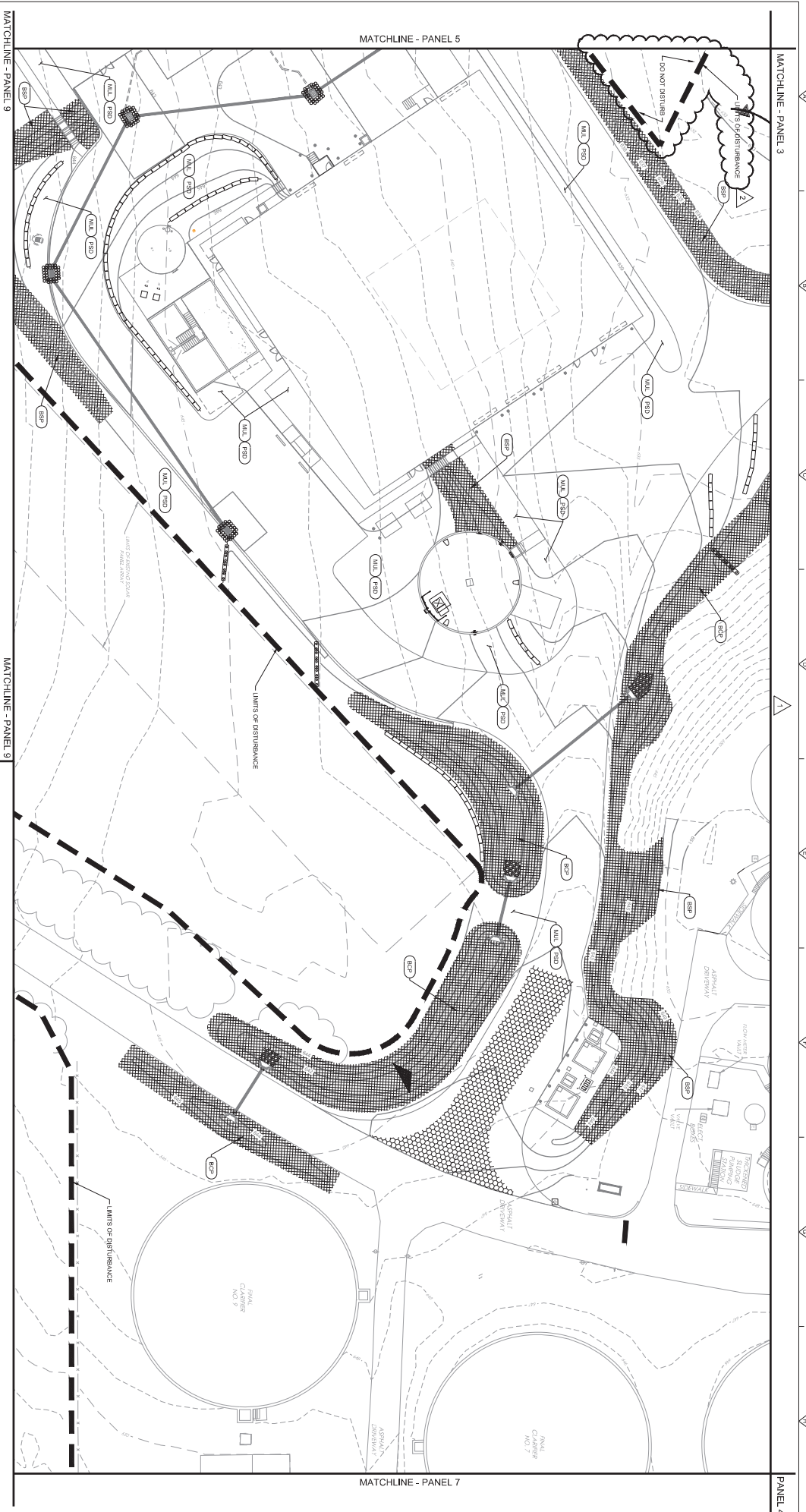
6092	PRE-CUT E-FLY PROTECTION (48x48")	M 1/2x2
6093	BUNNET / MATING SLOPE PROTECTION	G 1/2x1
6094	BUNNET / MATING CHANNEL PROTECTION	J 1/2x1
6095	STONE CHECK DAM	E 1/2x1
6096	STONE FILTER BERAM	R 1/2x9
6097	WATTLE / BUSH CHANNEL APPLICATION	O 1/2x2
6098	WATTLE / BUSH SLOPE APPLICATION	N 1/2x2
6099	SEMENTAL TRAP	L 1/2x2

CS2	STABILIZED CONSTRUCTION DIRT	B / C/D-1
MS3	WOOD LEVEL SPREADER	C / C/D-1
CMD	CONCRETE WASHOUT	S / C/D-2
SPD	SEEDMENT POND	Q / C/D-2
NAL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TSD	TEMPORARY SEEDING	N/A
PSD	PERMANENT SEEDING	N/A

AREAS DELINEATED BY LIMITS OF DISTURBANCE AND LABELED "DO NOT DISTURB" SHALL REMAIN UNDISTURBED DURING ALL PHASES OF CONSTRUCTION INCLUDING LAYDOWN AND TRAFFIC.



CITY OF FRANKLIN, TENNESSEE WATER RECLAMATION FACILITY MODIFICATIONS AND EXPANSION PROJECT COF CONTRACT NO. 2017-0264	EROSION PREVENTION & SEDIMENT CONTROL PLAN PANEL 6 - INTERIM PHASE
PROJECT NO.: 1481-0264-00000000 ITC NAME: COF_WMR_COV	SHEET NO.: C-43B

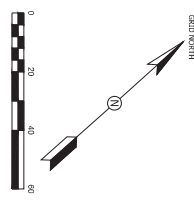


EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DTL # / SFT #
ESP	ENHANCED SILT FENCE/SEDIMENT BARRIER	A / CD-1
QPB	QUBB (COMBINATION) INLET PROTECTION	T / CD-10
WPP	WATER INLET PROTECTION (W/LOG & TROWEL)	D / CD-1
WPP	AREA INLET PROTECTION (STAKED W/ TIE/ TIE/ B)	I / CD-1
CBIL	CATCH BASIN INLET	K / CD-1
WPP	PIPE CULVERT INLET PROTECTION	F / CD-1

POP	FIRE OUTLET PROTECTION (BIPAP)	M/D2
BSP	BURNER/ MANTING SCOPE PROTECTION	G/D24
BPD	BURNER/ MANTING CHANNEL PROTECTION	J/D24
BGD	STONE CHECK DAM	E/D24
BBB	STONE FILTER BED	R/D24
MMV	MANTLE / ROBE CHANNEL APPLICATION	O/D22
MMB	MANTLE / FIRE SLOPE APPLICATION	N/D22
BBP	SEMENT RAP	L/D24

SPF	STABILIZED CONSTRUCTION EXT	B / CD-1
WLS	WOOD LEVEL SPREADER	C / CD-1
CMO	CONCRETE WASHOUT	S / CD-2
SPD	SEDIMENT POND	Q / CD-4
MLM	STRAW MULCH @ 3 TONS PER ACRE	N/A
TSB	TEMPORARY SEEDING	N/A
PSB	PERMANENT SEEDING	N/A

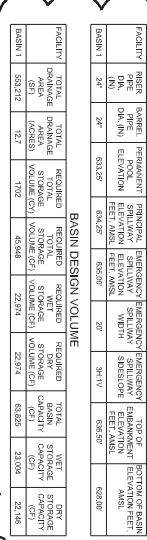
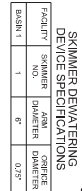
AREAS DELINEATED BY LIMITS OF DISTURBANCE AND LABELED "DO NOT DISTURB" SHALL REMAIN UNDISTURBED DURING ALL PHASES OF CONSTRUCTION INCLUDING LAYDOWN AND TRAFFIC.



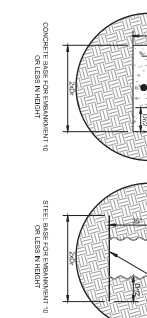
CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COF CONTRACT NO. 2017-0264

EROSION PREVENTION & SEDIMENT CONTROL PLAN

CONFORMED DRAWING - AUGUST 2014



SEDIMENT POND



FILTER BERM SPACING	
GROUND SLOPE (%)	RECOMMENDED SPACING BETWEEN BERMS ALONG GROUND (FT)
<2	1:0
2-4	1:0
5-10	7:5
10-20	2:5
>20	NOT ALLOWED

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

CITY OF FRANKLIN WATER RECLAMATION FACILITY MODIFICATIONS & EXPANSION PROJECT 135 Claude Yates Drive Franklin, TN 37064 (Williamson County)

Owner/Developer:
City of Franklin
Water Management Department
124 Lumber Drive
Franklin, TN 37064

September 11, 2018

Preamble

The City of Franklin Water Management Department (*Owner*) has contracted with Kiewit Infrastructure South Co (*Operator*) to perform the construction activities described in this Storm Water Pollution Prevention Plan (SWPPP) under the authority of a NPDES Tennessee General Permit TNR 100000 for Storm Water Discharge from Construction Activities. The Owner shall ensure that Operator personnel are qualified to perform this work as defined by the regulations. The Owner is aware that compliance with all conditions of this Permit and that any non-compliance with the Permit constitutes a violation of the Clean Water Act and is grounds for an enforcement action, termination of Permit coverage, or denial of a permit renewal application.

General Purpose

Storm water pollution prevention plans, (SWPPPs), shall be prepared in accordance with good engineering practices. The plan shall identify potential sources of pollution, which one would reasonably expect to affect the quality of storm water discharges from the construction site. The plan shall describe and ensure the implementation of practices which will be used to reduce the pollutants in storm water discharge associated with construction activity at the construction site and to assure compliance with the terms and conditions of this permit.

Site/Owner Information

Site/Owner Name:	City of Franklin Water Reclamation Facility
Site Location:	135 Claude Yates Drive Franklin, TN 37064
Owner/Primary Permittee:	City of Franklin Water Management Department
Owner/Primary Permittee Address and Phone:	124 Lumber Drive Franklin, TN 37064 (615) 794-4554

SIGNATURE FORM

This Storm Water Pollution Prevention Plan (SWPPP) is developed in accordance with the Tennessee General NPDES Permit (TNR100000) for Storm Water Discharges Associated with Construction Activity (TNCGP) effective October 1, 2016, and is prepared using sound engineering practices.

As instructed by TNCGP, this plan and all attachments are hereby submitted to the local Environmental Assistance Center (EAC), along with the complete, correctly signed Notice of Intent (NOI). Construction will not be initiated prior to 30 days from the date of submittal of this document, or prior to receipt of a Notice of Coverage (NOC) from the Tennessee Department of Environment and Conservation (TDEC).

Developer / Owner: City of Franklin Water Management Department
124 Lumber Drive
Franklin, TN 37064
(615) 794-4554

Contact Person: Brian Goodwin, PE, Assistant Director

Permit Application Certification and Signature (must be signed by president, V.P. or equivalent, or ranking elected official)		
I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury		
Representative of owner/developer; print or type	Signature	Date
Mark Hilty, Assist. City Administrator		

Primary Contractor: Kiewit Infrastructure South Co.
4405 International Blvd. NW, Suite C-101
Norcross, GA 30093
(678) 794-2121

Contact Person: Steve Davis, Project Manager

Certification for Contractor(s) (must be signed by president, V.P. or equivalent)		
I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury		
1. Representative of primary contractor; print or type	Signature by representative of primary contractor	Date
Tom Trimble, VP, Area Manager		

The specific individual responsible for the implementation and maintenance of the construction site storm water control plan will be Lauren Micallef.

*****A COPY OF THE SWPPP AND THE NOTICE OF COVERAGE MUST BE
*** MAINTAINED ON THE PROJECT SITE AT ALL TIMES.**

SPECIAL INSTRUCTIONS TO THE CONTRACTOR

The individual responsible for installation, maintenance, and inspections of erosion and sediment control measures will be Lauren Micallef of Kiewit Infrastructure South Co. The above signed individual has / has not (circle one) completed the *Fundamentals of Erosion Prevention and Sediment Control* course offered by the State of Tennessee. The above signed individual's mobile telephone number is (303) 515-1407.

Current versions of this SWPPP, the NOI, and the NOC will be kept on the site for the duration of the project. These items will be available for the use of all operators and site personnel involved with erosion and sediment controls, and will be available to TDEC personnel visiting the site. A notice will be posted near the construction entrance containing a copy of the NOC with the tracking number assigned by the EAC, the name, telephone number of a contact person for the construction project, and a brief description of the project.

If at any time there is a change of contractor, a new or revised NOI will be submitted to TDEC at least 48 hours prior to when the new contractor assumes operational control over the site or begins work at the site.

Any new contractor on the project that has any responsibility to install, inspect, or maintain erosion or sediment control measures will sign the contractor's certification on a copy of the NOI (Appendix H) and will submit it to the local EAC. Any correspondence with TDEC or any EAC will reference the tracking number assigned by TDEC to the project. The City of Franklin will submit a Notice of Termination (NOT; Appendix I) after the complete installation and successful establishment of the final stabilization activities at the site.

It is the intention and goal of the TNCGP and this SWPPP that any discharge from the property described in this document have no objectionable color contrast to the water body that receives it. The construction activity will be carried out in such a manner as will prevent any discharge that would

cause a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of the waters on the property or downstream of the property for fish and aquatic life, livestock watering and wildlife, recreation, irrigation, navigation, or industrial or domestic water supply.

This plan may be amended for reasons described below, or for other reasons. When the plans are revised, the contractor will implement the changes to erosion protection and sediment controls within 48 hours after the need for modification is identified. In the event of release of a reportable quantity of toxic or hazardous substances, the contractor will comply with the EPA's regulations that can be found under 40CFR, parts 117 and 302 at the EPA web site at www.epa.gov. Any generally significant spill should be cleaned up and not allowed to be transported in runoff into streams. The course of action should consist of the following steps:

1. Contractor will notify permittee
2. Permittee will notify National Response Center and Tennessee Emergency Management Agency
(TEMA as well as Nashville Environmental Assistance Center (EAC)).
3. Permittee will revise the SWPPP to incorporate measures that will prevent reoccurrence of such releases.

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- Figure 1 – Site Location Map
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- Figure 3 – Drainage Areas Map Existing Conditions
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Appendices

- Appendix A – Tennessee General Permit No. TNR 100000
- Appendix B – Soil Map
- Appendix C – Calculations
- Appendix D – Figures
- Appendix E – Grading and Drainage Plans
- Appendix F – Erosion Protection and Sediment Control Plan Sheets
- Appendix G – Construction Storm Water Inspection Report
- Appendix H – Notice Of Intent
- Appendix I – Notice Of Termination

1.0 Introduction

The City of Franklin (Owner) under contract with Kiewit Infrastructure South Co (Operator) plans to modify and expand their existing Water Reclamation Facility at 135 Claude Yates Drive. Under this project the City and Contractor propose to construct the site infrastructure including driveways, parking areas, drainage facilities, and utilities in accordance with the Tennessee Department of Environment and Conservation's (TDEC) General Permit TNR100000 (Permit) and the described activities in this Storm Water Pollution Prevention Plan (SWPPP). The Owner shall ensure that all contractor personnel are qualified to perform the work defined by these regulations. The Owner is fully aware of the importance of compliance with all conditions of this permit and that any non-compliance is a violation of the Clean Water Act and may result in termination of permit coverage or denial of any permit renewal application.

Thus, in accordance with Section 3 of the Tennessee Department of Environment and Conservation (TDEC) General Permit TNR100000, all components of the Storm Water Pollution Prevention Plan have been included herein. Also attached, for reference only, is a copy of the permit regulations (Appendix A) that are required to be on-site at all times.

2.0 Site Description

2.1 Construction Activity

Provide a description of the nature of the construction activity.

The project includes improvement and expansion of the existing Franklin Water Reclamation Facility at 135 Claude Yates Drive, Franklin, Tennessee. Improvements will include modification of existing structures, addition of new structures, additional of subsurface piping and utilities, paving and grading. Proposed construction activity for completion of the site improvements will be limited to an area encompassing approximately 40 acres; however, the entire area within this perimeter will not be disturbed during construction. Construction includes improvements to multiple isolated components of the facility as well as construction of new facility components which together make up the whole of the treatment facility. The construction activities for this project shall include grading activities, storm water drainage and utility installation, paving, building construction, and construction of tanks, junction structures, and other treatment facilities. Grading activities will include stripping of topsoil, stockpiling, excavation, fill placement, compaction, and placement of topsoil, mulching, and seeding.

2.2 Sequence

Provide a description of the intended sequence of major activities which disturb soils for major portions of the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation, etc.).

The construction activities for the Franklin WRF Modifications and Expansion Project will occur in multiple phases over an approximate 3.5-year construction schedule. Construction sequencing shall generally be as follows:

1. Install Initial phase EPSC measures including construction entrance and all perimeter controls
2. New Headworks and Equalization Basin
 - Demolition of old BNR basins & Clarifiers 1-4
 - Excavation of Area for new construction
 - Construction of EQ Basin, Headworks Building, and Odor Control Facilities
 - Installation of connecting influent and effluent piping
 - Installation of associated utilities and piping
 - Backfilling, placing topsoil, and finish grading
 - Mulching and seeding
3. New Solids Processing Area
 - Stripping and stockpiling of topsoil
 - Grading including excavation, fill placement, and compaction for Biosolids facilities, access roadway, and stormwater detention ponds.
 - Trenching and installation of various utilities including storm water, sanitary service, plant waste, natural gas service, potable water, plant water, electric, odor control, and other process piping.
 - Building and Tank construction
 - Paving and site concrete placement
 - Backfilling landscape areas with topsoil and finish grading
 - Mulching and seeding
4. BNR Basin Modifications
 - Installation of new influent piping
 - Construction of new pipe junction/distribution structure
 - Demolition of existing pipe junction/distribution structures
 - Backfilling, placing topsoil, and finish grading
 - Mulching and seeding
5. New Electrical Building & Alum Pad
 - Grading and compaction
 - Building and Containment Facility Construction
 - Associated utility trenching and backfill
 - Placing topsoil and finish grading
 - Mulching and seeding
6. New UV Disinfection Facility
 - Partial demolition of existing Filter tanks
 - Excavation of area for new facility

- Construction of New UV facility and Junction structures
 - Connection of influent/effluent piping
 - Backfilling, placing topsoil, and finish grading
 - Mulching and seeding
7. Modification of Clarifier Influent Distribution Box
- Grading and excavation for structure modifications
 - Installation of new influent/effluent piping
 - Backfilling, placing topsoil, and finish grading
 - Mulching and seeding

All final phase erosion prevention and sediment control measures shall remain in place until suitable vegetation is established and the probability of erosion is eliminated.

2.3 Disturbed Area

Estimates of the total area of the site and total area of the site that is expected to be disturbed by excavation, grading, or other activities.

Total Site Area:	Approximately 109.6 Acres
Total Disturbed Area:	Approximately 40.3 Acres

2.4 Topography

Description of the topography of the site including an estimation of the percent slope and the variation in percent slope found on the site; based on the drainage area serving each outfall.

The site of the existing Water Reclamation Facility sits inside a bend of the Harpeth River above and outside the 100-year floodplain limits. The improved site is flat with gentle slopes and swales between various treatment process building and equipment. Areas of steep fill slopes exist along the south and east perimeter of the existing improved site where the site ties back down to the floodplain of the river. The north and west portions of the improved site as well as the majority of the balance of the property slopes inward (away from the river) toward on-site closed depressions. The area of the new biosolids processing facility is currently undeveloped and has slopes ranging from virtually flat (<1%) to 10%. Primary stormwater discharge from the site is via sheet flow toward the river along with a couple area of shallow concentrated flow.

2.5 Soils

Any data describing the soil (data may be referenced or summarized) or the quality of any discharge from the site.

According to USDA-NRCS Soil Survey maps, the following soils are present on site:

<u>Map Unit</u>	<u>Map Unit (Soil) Name</u>	<u>Hydrologic Soil Group</u>
ArA	Armour silt loam, 0 to 2 percent slopes	B
ArB2	Armour silt loam, 2 to 5 percent slopes, eroded	B
ArC2	Armour silt loam, 5 to 12 percent slopes, eroded	B
AtC3	Armour silty clay loam, 5 to 12 percent slopes, severely eroded	B
Hu	Huntington silt loam, phosphatic	B
MbB2	Maury silt loam, 2 to 5 percent slopes, eroded	A
MbC2	Maury silt loam, 5 to 12 percent slopes, eroded	A
McC3	Maury silty clay loam, 5 to 12 percent slopes, severely eroded	A

For a soil map, refer to Appendix B.

2.6 Runoff Coefficient

An estimate of the runoff coefficient of the site after construction activities are completed and how the runoff will be handled to prevent erosion at the permanent outfall and receiving stream.

Approximately 10.0 acres of the site will be considered impervious after construction with the balance of the site (99.6 acres) remaining pervious. A composite post developed runoff coefficient of 0.28 is anticipated. The increase in runoff anticipated from development will be mitigated through the construction of two on-site stormwater detention basins. Final EPSC stabilization includes implementation of turf reinforcement matting on slopes and swales to reduce the possibility of erosion resulting from development.

(Refer to Appendix C for calculations).

2.7 Maps

The following maps are included in this SWPPP. Figures 1 thru 4 are included in Appendix D.

- a. Location Map which is based upon the USGS Topographic Quadrangle Map is attached as Figure 1;
- b. Site Map which is based upon aerial photography is attached as Figure 2;
- c. A Drainage Areas Map for Existing Conditions is included as Figure 3;
- d. A Drainage Areas Map for Proposed Conditions is included as Figure 4

- e. Major structural and non-structural controls are shown on the Erosion Prevention and Sediment Control Plan included in Appendix F.

2.8 Outfalls

Careful identification on the site map of outfall points for storm water discharges from the site; the plan shall identify outfall points intended for coverage under the general permit (see Figure 2 and Erosion Prevention and Sediment Control Plans, Appendix F).

Any stormwater runoff which leaves this site would enter the Harpeth River. Stormwater discharge from the Site is conveyed south and east primarily by sheet flow or shallow concentrated flow to the Harpeth River. There is a single 18"RCP point source discharge on the northeast side of the plant which conveys runoff from the existing paved drive located southeast of the main plant influent pump station. Stormwater runoff from the north and west portions of the site is conveyed by a combination of sheet flow and storm sewer conduit flow to existing on-site closed depressions.

2.9 Other Discharges

A description of any discharge associated with industrial activity other than construction storm water that originates on site and the location of that activity.

Reclaimed wastewater is discharged from the plant to the Harpeth River under NPDES Permit TN0028827 following treatment and disinfection.

2.10 Wetlands or Streams

Identification of any stream or wetland adjacent to the project, a description of any anticipated alteration of these waters and the permit number or the tracking number of the ARAP or Section 401 Certification issued for the alteration.

No alterations of protected waters are planned as a result of this project.

2.11 Receiving Waters

The name of the receiving water(s) and approximate size and location of affected wetland acreage at the site.

The receiving waters for the project site will be the Harpeth River.

3.0 **EROSION PREVENTION AND SEDIMENT CONTROLS**

3.1 Pre-Construction and During Construction

Storm water runoff controls for the proposed project will consist of the structural control measures themselves and the maintenance and inspection practices discussed later in this plan. The structural control measures, maintenance and inspection practices are designed to retain sediment on site, therefore they generally need to be placed and functional prior to earth moving activities beginning for the project. All structural control measures and phases for their use can be found in Erosion Control Plan sheets in Appendix F. The Operator shall be responsible for the installation and maintenance of all erosion control structures. The Owner shall be responsible for the inspection of all erosion control structures and for notifying the Operator of any maintenance issues. At no time will the existing vegetation be destroyed, removed or disturbed for more than 14 calendar days prior to grading unless temporary cover is installed. Any temporary erosion control measures used on site may be removed at the beginning of the workday and replaced at the end of the workday until all construction activities are done in the area and suitable vegetative cover is established. At no time will erosion control blanket be considered as final stabilizing vegetation nor will the area be considered 90% stable with just erosion control blanket and no vegetative growth. The goal of this plan is to protect the existing quality of the offsite receiving waters of this project.

3.2 Stabilization, Structural, and Non-Structural Controls

The following is a description of the sequence of construction activities that are planned for the project site along with the structural control and stabilization measures associated with each activity. EPSC measures have been designed to minimize erosion and maximize sediment removal resulting from a 2-year, 24-hour return interval storm.

3.2.1 Clearing, Grubbing, and Demolition

General Requirements: The Owner will refer to the TDEC Erosion and Sediment Control Handbook for details on general erosion and sediment control measures.

Stabilization: Interim stabilization practices at phase-specific locations are detailed on the Erosion Prevention and Sediment Control Plan and details located in Appendix F. The only areas to be cleared shall be the areas where earth moving activities are planned within 14 days of clearing. Upon the completion of earth moving activities in the area, temporary seeding and mulch shall be used to stabilize the construction slopes until final dressing of slopes and final stabilization is required.

Structural Practices: Structural practices for this project shall include, but are not limited to, stabilized construction entrance, temporary enhanced silt fence, temporary wattle/tube channel application, and temporary water/tube

inlet protection. All structural items shall be installed prior to or during clearing operations, see Appendix F for details and locations.

Responsible Parties: The Operator shall be responsible for the installation and maintenance of all erosion control structures. The Owner shall be responsible for the inspection of all erosion control structures and for notifying the Operator of any maintenance issues.

3.2.2 Grading and Excavation

General Requirements: The Owner will refer to the TDEC Erosion and Sediment Control Handbook for details on general erosion and sediment control measures.

Stabilization Practices: All exposed slopes shall have temporary cover as soon as 7 days, but no later than 15 days, after work in the area has been completed.

Structural Practices: Structural practices for this project shall include, but are not limited to temporary silt fence, check dams, inlet protection for catch basins, wattle/tube channel applications, wattle/tube slope applications, and concrete wash down area. All structural items shall be installed prior to or during clearing operations, see Appendix E for details and locations.

Responsible Parties: The Operator shall be responsible for the installation and maintenance of all erosion control structures. The Owner shall be responsible for the inspection of all erosion control structures and for notifying the Operator of any maintenance issues.

3.2.3 Final Stabilization

General Requirements: Owner shall refer to the TDEC Erosion and Sediment Control Handbook for details on general erosion and sediment control measures.

Stabilization Practices: Final stabilization of all slopes shall take place after completion of the final grading. Final dressing of slopes shall include final grading of slopes, placing of top soil, seeding and mulching, sodding and/or placement of erosion control blanket as shown on the EPSC plans. Final stabilization shall occur as soon as 7 days, but no later than 15 days, of final slope dressing.

Structural Practices: Structural practices for this project shall include, but are not limited to, placement of top soil, seeding and mulching, and placement of erosion control blanket on slopes and channels. At no time shall erosion control blanket be considered as final stabilization. Areas covered with erosion control blanket shall be considered stabilized only when there is suitable vegetative growth on said areas.

Responsible Parties: The Operator shall be responsible for the installation and maintenance of all stabilization control measures. The Owner shall be responsible for the inspection of all stabilization control measures and for notifying the Operator of any maintenance issues. When the site has achieved 90% stability, the Owner can then post the Notice of Termination (NOT) thus releasing the Operator from their contractual requirements with respect to Erosion Prevention and Sediment Control.

3.3 Post-Construction

The Owner does not anticipate any problems with pollutants from the project site after construction operations have been completed. Maintenance of the storm water management measures is not required by the permit upon the completion of all construction activities on the site, therefore routine maintenance will not be provided by the Owner.

3.3.1 Pollutant Controls

Pollutant controls will include debris removal from drainage structures and trash removal from the right-of-way areas. The owner of the property will need to develop a mowing and maintenance program for the turf grass areas of the project site. Any solid or liquid spills from over the road vehicles will be kept from entering waters of the State by the owner of the property. There are no special types of structures included in this project to aid with these types of pollutants. Additional potential pollutants include potential wastewater chemicals used in the wastewater treatment and biosolids production processes. Structural containment areas are incorporated into the construction plans for these types of potential pollutants.

3.3.2 Velocity Controls

Pipe outlet protection in the form of Rip-Rap is shown at proposed points of discharge from all culverts and storm water pipe outlets. In addition, wood level spreaders are included at the outlets of the two stormwater detention ponds. No other velocity controls are anticipated.

4.0 STORM WATER MANAGEMENT

4.1 Required Records

The Operator shall maintain, at the site, the following records of construction activities:

- a. The dates of all major grading activities.
- b. The dates when construction activities temporarily or permanently ceased.
- c. The dates when stabilization measures, temporary and permanent, were initiated.
- d. Daily rainfall amounts (see Appendix G for sample form)

The Owner shall keep copies of the Storm Water Pollution Prevention Plan, all permits, all reports required by the permits and all records of data used to complete the Notice of Intent, for a period of no less than three years from the date of the Notice of Termination is filed. This length of time may be extended by a written request to the Tennessee Department of Environment and Conservation.

4.2 Maintenance

Maintenance operations shall be undertaken to insure that existing vegetation, proposed vegetation, erosion and sediment control measures and all other protective measures identified in the Erosion Control Plans shall be kept in effective operating condition. Maintenance issues identified by the Owner's inspector, or by other means, shall be repaired or replaced before the next storm event, but in no case more than seven days after the need is identified. In the case that maintenance in the area is impracticable at that time, a record shall be made and the issues shall be resolved at a later date if possible. All maintenance shall be monitored throughout the inspection procedure listed below, but shall not be limited to, the following practices:

- a. The observation of installing the control measures in order to determine compliance with the manufacturer's specifications and good engineering practices for the use of the control.
- b. Removal of site sediment accumulations so that sediment does not reach waters of the State and offsite impacts are minimized (Note: Sediment accumulations that reach waters of the State must not be removed until consulting with TDEC).
- c. Removal of sediment from silt fence, check dams, wattle/tube applications, dumped rock dissipater, rock silt screens and other sediment controls when the design capacity has been reduced by 50%.

- d. The pickup or prevention of litter, construction debris and construction chemicals from becoming pollutant sources prior to any anticipated storm events.

In addition to the practices listed above, the project shall be monitored by the Owner to ensure the maintenance and effectiveness of the erosion control measures. At any time the project Operator is found to be neglecting any erosion control measures, the Owner may withhold payment of future progress estimates until the project Operator has performed the necessary maintenance or corrective measures. At any time the project Operator refuses or fails to perform any of the necessary maintenance or corrective measures, the Owner may employ outside assistance or use their own department personnel to provide the needed protective measures. All direct costs plus engineering costs may be withheld from the project Operator's monthly progress estimate.

4.3 Inspections

The inspection process was designed to provide protection for the Owner against non-compliance with all permits and to ensure that erosion and sediment controls and all other protective measures are in place and maintained at all times during the construction process. Inspectors must have successfully completed the "Fundamentals of Erosion Prevention and Sediment Control" course, or equivalent course, for individuals involved in land-disturbing activities which provides a working knowledge of erosion prevention and sediment controls. A copy of the certification or training record for inspector certification should be kept on site.

4.3.1 Schedule

Care should be taken in any area that discharges offsite not to let any sediment enter "Waters of the State". The schedule of inspection by qualified personal will be as follows:

- a. Before anticipated storm events or series of events such as intermittent showers over one or more days.
- b. Within 24 hours after the end of a storm event that exceeds 0.5 inches (including weekends and state holidays).
- c. At least twice every 7 days for the duration of the construction process, including weekends, state holidays and periods of time when no construction or grading activities are taking place.
- d. Inspections shall be performed at least 72 hours apart.

Any required maintenance or repairs identified during an inspection shall be made before the next rain event if possible, but in no case more than 7 days after the need is identified.

4.3.2 Documentation Requirements

All inspections shall be documented in a written report and will include the following items:

- a. Scope of the inspection.
- b. Name(s), title and qualifications of the personnel making the inspection.
- c. The date(s) of the inspection.
- d. All maintenance issues, any sediment discharges at outlets, any pollutants from or on the site and any areas where controls failed to operate as designed or proved inadequate for a particular location.
- e. All actions taken to replace, modify or repair any control measures identified as being inadequate for the area or in disrepair during inspections.

A sample of the inspection form for this project is included in Appendix G. The Owner shall certify, on a weekly basis, that the weekly inspections of erosion and sediment controls and outfall points inspections are performed and that all planned and designed erosion and sediment controls are installed and performing as designed. The inspector will certify on a weekly basis (on the form found in Appendix G) that the inspection described above has been performed and whether or not all of the erosion and sediment control measures are installed and in working order. The inspector shall also maintain a rain gauge on the project site and keep a daily log of gauge readings. Inspection documentation will be maintained on site and made available upon request. Inspections reports must be submitted to the division within 10 days of the request. The record of certifications on the form along with rain data will be submitted to the local EAC by the 15th of the month (postmarked) following the end of the quarter. Quarters are January – March, April – June, July – September, and October – December. The certification and rain data should be addressed to:

Tennessee Department of Environment and Conservation
Division of Water Pollution Control
Permit Section, 6th Floor
L & C Tower Annex
401 Church Street
Nashville, Tennessee, 37243

4.3.3 Areas to be Inspected

The Owner's qualified personnel will inspect all disturbed areas of the construction site that are not finally stabilized for evidence of, or the potential for, pollutants to enter the drainage system. These areas will include, but are not limited to, the following:

- a. Disturbed areas and storage areas that are exposed to precipitation.
- b. Erosion and sediment control measures called for in the plans.
- c. Outfall points where discharges go offsite or could enter "Waters of the State".
- d. All ingress/egress to public or private roads adjacent to the site for offsite tracking of sediment.

4.3.4 Repair, Modification and Revision

During the inspections, if there are any inadequate measures, maintenance issues or modifications required, these requirements should be carried out within 24 hours of the inspection unless conditions make it impractical, at which time the condition should be documented and a time line is set to meet the requirements as documented. If there are any revisions required to the Plans or the SWPPP, these revisions should be made no later than 7 calendar days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than 14 calendar days from the time of the inspection identifying the deficiency.

5.0 OTHER ITEMS REQUIRING CONTROL

5.1 Construction Materials

Construction materials that are anticipated to be stockpiled on the construction site include:

Lumber	Masonry	Structural Steel	Rebar	Drainage
Structures	Mineral aggregate	Soil	Ductile Iron Pipe and pipe fittings	
PVC Pipe and fittings		Concrete Pipe	Water Valves, Valve	
Boxes, and other water system appurtenances			sanitary manhole	
structures and lids				

All stockpiles of erodible construction materials shall have perimeter controls down grade of the stockpile. Any stockpiles of top soil shall have perimeter controls and temporary cover until such time of their use. Non-erodable construction materials shall be stored in areas free from run-on and runoff and in an organized manner.

5.2 Waste Materials

Waste material (earth and rock) from the construction project site shall be disposed of in an off-site area pre-approved by the Owner. The Operator shall be responsible for acquiring all necessary permits for the disposal, such as, but not limited to, NPDES, Aquatic Resources Alternation Permit, Corps of Engineers Section 404 Permit and TVA 26a Permit.

5.3 Other Materials

Other materials not used for construction, but required for construction, and stored at the site shall be placed in a protected area to prevent pollution of receiving waters. These items include, but are not limited to, the following:

- a. Fertilizer and Lime
- b. Diesel and Gas
- c. Machinery Lubricants (Oil and Grease)

Refueling stations shall be checked daily for signs of spillage and leaks. All fuel storage tanks shall be checked daily for signs of leakage. Machinery shall be checked weekly for leaks of any material that would cause a visible floating scum, objectionable color or odor in the receiving streams. The Operator is responsible for compliance with all applicable EPA and USDOT guidelines regarding equipment related fluids as well as all National Fire Protection Association regulations regarding flammable liquids.

5.4 Non-Storm Water Discharges

The following non-storm water discharges have the potential of occurring from the site during construction:

- a. Groundwater may be intercepted during construction. If this occurs then the Plans and the SWPPP shall be modified to incorporate the appropriate measures for these areas.
- b. Water used to wash off pavement (where there has been no spillage or leakage of toxic or hazardous materials).
- c. Dust suppression water.
- d. Water used to wash machinery.

All non-storm water discharges shall be directed to stable reduction structures prior to leaving the site outfalls.

5.5 Toxic or Hazardous Substances

In the event of a release of a reportable quantity of toxic or hazardous substance, the following steps shall be taken:

- a. Operator will notify permittee, City of Franklin Water Management Department, Mr. Brian Goodwin, PE at (615) 794-4554.
- b. Permittee will notify National Response Center and Tennessee Emergency Management Agency (TEMA) as well as Nashville Environmental Assistance Center (EAC).
- c. Permittee will revise the SWPPP to incorporate measures that will prevent reoccurrence of such releases.

The definition of a “Reportable Quantity” can be found in the EPA regulations under 40CFR, part 117 and 302 on the EPA web site at www.epa.gov. Any significant spill shall be cleaned up and not allowed to be transported by runoff into “Waters of the State”.

6.0 **REQUIREMENTS FOR PLANS REPORTS**

6.1 Keeping Plans Current

The Owner will be responsible for amending the Plans and SWPPP for any of the following conditions:

- a. For any change in the scope of the project that would have a significant effect on the discharge of pollutants to the “Waters of the State” and which has not otherwise been addressed in the Plans.
- b. Whenever inspections or investigations by Operators, inspectors, local, state, or federal officials indicate that the Plans are ineffective in eliminating or significantly minimizing pollutants from construction sources, or not achieving the general objectives of controlling pollutants in storm water runoff.
- c. If or when any Operator, or new Operator, and/or sub-operator is assigned or relieved of their responsibility to implement a portion of the Plan.
- d. When the Plan must be modified to prevent a negative impact to legally protected state or federally listed or proposed threatened or endangered aquatic fauna.

6.2 Making Plans Accessible

The Operator shall retain a copy of this Plan and all permits on site, or other location accessible to TDEC and the public, from the date that construction begins until the date of final stabilization. The Operator shall have a copy of the Plan available at the

location where work is occurring on site for use by all Operators and any other personnel identified as having responsibilities in the area under the Plan.

The Operator shall post the following information near the entrance of the construction site:

- a. A copy of the Notice of Coverage (NOC) with the NPDES permit number for the project.
- b. The name and telephone number of a local contact person.
- c. A brief description of the project.
- d. The location of the Plan and permits if the site is inactive or does not have an on-site location to store the Plan.

If it is not feasible to post this information near the main entrance of the site, then the notice shall be posted in a local building or kept in the Owner's representative's vehicle or the Owner's inspector's vehicle. This permit at no time provides the public with any right to trespass or requires the Owner, or Operator, to allow members of the public to access the construction site for any reason, including inspection of a site.

6.3 Notice of Termination

When all storm water discharges from the construction site, due to construction activities and authorized by the Permit, are eliminated due to final stabilization, the Owner will submit a Notice of Termination (NOT) signed in accordance with the Permit. The elimination of storm water discharges, in accordance with the NOT, associated with construction activities is as follows:

- a. That all disturbed areas and exposed slopes of the construction site under the Operators control have been finally stabilized.
- b. All temporary erosion and sediment control measures have been removed at the appropriate time to insure final stabilization is maintained.
- c. At no time will an area covered with erosion control blanket be considered as stabilized.
- d. That all storm water discharges associated with construction activities for the site, authorized by the NPDES general permit, have been eliminated from the site runoff where the Operator has control.

The NOT form is provided in Appendix I of this Plan.

6.4 Retention of Records

The Owner shall retain copies of this Plan, all reports required by the Permit, records of all data collected on site, all information required to complete the Notice of Intent and all information required to complete the Notice of Termination for a period of at least three years from the date the NOT was filed (see Appendix I). This length of time may be extended by a written request to the Nashville Environmental Assistance Centers (EAC).

7.0 PERMIT CONDITIONS

The following paragraphs highlight certain of the standard permit conditions for the general permit. Please refer to Section 7 of the general permit in Appendix A for the complete standard permit conditions.

7.1 Continuation of Expired Permit

This Permit expires on September 30, 2021. However, an expired general permit may continue in force and effect until a new general permit replaces the expired one. To retain coverage under the continued permit, permittees should provide notice to their intent to remain covered under this permit.

7.2 Duty to Provide Information

The permittee shall furnish to the division or an authorized representative of the division, within a time specified by the division, any information that the division may request to determine compliance with this permit or other information relevant to the protection of the waters of the state. The permittee shall also furnish to the division, upon request, copies of records required to be kept by this permit.

7.3 Signature Requirements

7.3.1 Notice of Intent

The Notice of Intent and SWPPP for this City of Franklin project within Franklin, Tennessee shall be signed by the owner's representative, Mr. Mark Hilty, Assistant City Administrator.

7.3.2 All Other Reports

All reports and SWPPP revisions required by the Permit and information requested by TDEC, or TCEC representative, shall be signed by the person described in Section 7.7.1, or by a duly authorized representative of that person. See Section 7.7.3 of the general permit in Appendix A for information on the qualification for a duly authorized representative. See Sections 7.7.5

and 7.7.6 of the general permit in Appendix A for signatory requirements and required signatory statements.

7.4 Penalties for Falsification of Reports

Knowingly making any false statements on any report required by this permit may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act and in T.C.A. 69-3-115 of the Tennessee Water Quality Control Act.

7.5 Oil and Hazardous Substance Liability

Nothing in the Permit shall be construed to preclude the institution of any legal action or relieve the Owner from any responsibilities, liabilities or penalties to which the Owner is or may be subject under Section 311 of the Clean Water Act or Section 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

7.6 Inspection and Entry

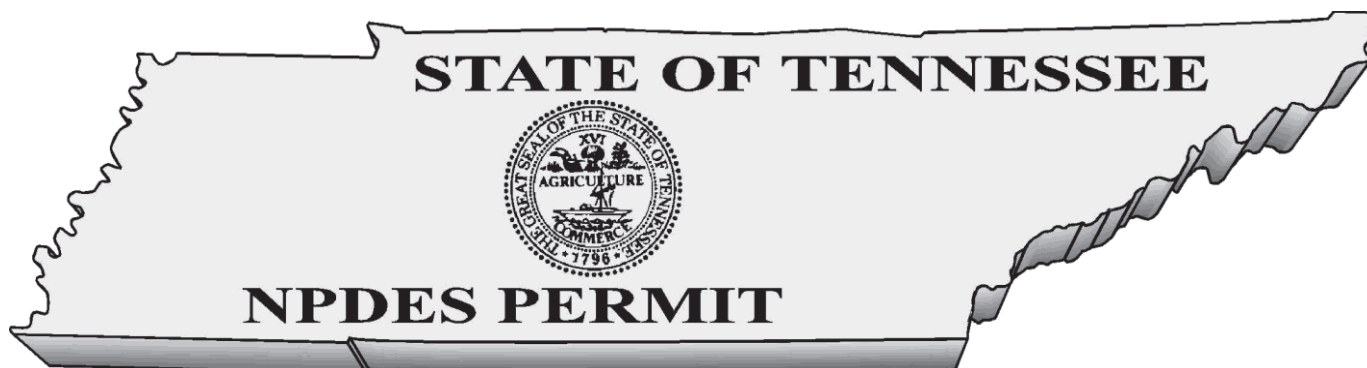
The Owner and Operator shall allow authorized City, State, and Federal regulatory representatives, upon the presentation of credentials and other documents as may be required by law:

- a. To enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- b. To have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
- c. To inspect any facilities or equipment (including monitoring, and control equipment).

Appendices

Appendix A

Tennessee General Permit No. TNR 10-0000



GENERAL NPDES PERMIT
FOR DISCHARGES OF STORMWATER
ASSOCIATED WITH CONSTRUCTION ACTIVITIES

PERMIT NO. TNR100000

Under authority of the Tennessee Water Quality Control Act of 1977 ([T.C.A. 69-3-101](#) et seq.) and the authorization by the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 ([33 U.S.C. 1251](#), et seq.) and the [Water Quality Act of 1987, P.L. 100-4](#), including special requirements as provided in part 5.4 (Discharges into Waters with Unavailable Parameters or Exceptional Tennessee Waters) of this general permit, operators of point source discharges of stormwater associated with construction activities into waters of the State of Tennessee, are authorized to discharge stormwater associated with construction activities in accordance with the following permit monitoring and reporting requirements, effluent limitations, and other provisions as set forth in parts 1 through 10 herein, from the subject outfalls to waters of the State of Tennessee.

This permit is issued on: **September 30, 2016**

This permit is effective on: **October 1, 2016**

This permit expires on: **September 30, 2021**

A handwritten signature in blue ink, appearing to read "T. Calabrese", is written over a horizontal line.

for Tisha Calabrese Benton
Director

Tennessee General Permit No. TNR100000
Stormwater Discharges Associated with Construction Activities

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1. COVERAGE UNDER THIS GENERAL PERMIT

1.1. Permit Area

The construction general permit (CGP) covers all areas of the State of Tennessee.

1.2. Discharges Covered by this Permit

1.2.1. Stormwater discharges associated with construction activities

This permit authorizes point source discharges of stormwater from construction activities that result in soil disturbances of one or more acres. Soil disturbances of less than one acre are required to obtain authorization under this permit if construction activities are part of a larger common plan of development or sale that comprises at least one acre of cumulative land disturbance. Construction activities include clearing, grading, filling and excavating. One or more site [operators](#) must maintain coverage under this permit for all portions of a site that have not been permanently stabilized.

Projects of less than one acre of total land disturbance may also be required to obtain authorization under this permit if:

- a) the director has determined that the stormwater discharge from a site is causing, contributing to, or is likely to contribute to a violation of a state water quality standard;
- b) the director has determined that the stormwater discharge is, or is likely to be a significant contributor of pollutants to [waters of the state](#); or
- c) changes in state or federal rules require sites of less than one acre that are not part of a larger common plan of development or sale to obtain a stormwater permit.

Any discharge of stormwater, or other fluid, to an improved sinkhole or injection well must be authorized by permit or rule as a Class V underground injection well under the provisions of Tennessee Rules, Chapter [0400-45-06](#).

1.2.2. Stormwater discharges associated with construction support activities

This permit also authorizes stormwater discharges from support activities associated with a permitted construction site. Support activities may include concrete or asphalt batch plants, equipment staging yards, material storage areas, excavated material disposal areas and borrow areas. Support activities are authorized provided all of the following conditions are met:

- a) The support activity is related to a construction site that is covered under this general permit.
- b) The [operator](#) of the support activity is the same as the [operator](#) of the construction site.
- c) The support activity is not a commercial operation serving multiple unrelated construction projects by different [operators](#).
- d) The support activity does not operate beyond the completion of the construction activity of the last construction project it supports.
- e) Support activities are identified in the Notice of Intent (NOI) and the Stormwater Pollution Prevention Plan ([SWPPP](#)). The appropriate erosion prevention and sediment

controls and measures applicable to the support activity shall be described in a comprehensive [SWPPP](#) covering the discharges from the support activity areas.

TDOT projects shall be addressed in the Waste and Borrow Policy. Stormwater discharges associated with support activities that have been issued a separate individual permit or an alternative general permit are not authorized by this general permit. This permit does not authorize any process wastewater discharges from support activities. Process wastewater discharges from support activities must be authorized by an individual permit or other appropriate general permit.

1.2.3. Non-stormwater discharges authorized by this permit

The following non-stormwater discharges from active construction sites are authorized by this permit provided the non-stormwater component of the discharge is in compliance with Section 3.5.9 below (*Pollution prevention measures for non-stormwater discharges*):

- a) Dewatering of collected stormwater and ground water.
- b) Waters used to wash dust and soils from vehicles where detergents are not used and detention and/or filtering is provided before the water leaves site. Wash removal of process materials such as oil, asphalt or concrete is not authorized.
- c) Water used to control dust in accordance with Section 3.5.5 below.
- d) Potable water sources, including waterline flushings, from which chlorine has been removed to the maximum extent practicable.
- e) Routine external building washdown that does not use detergents or other chemicals.
- f) Uncontaminated groundwater or spring water.
- g) Foundation or footing drains where flows are not contaminated with pollutants (e.g., process materials such as solvents, heavy metals, etc.).

All non-stormwater discharges authorized by this permit must be free of sediment and other solids, must not cause erosion of soils, and must not result in sediment impacts to receiving streams.

1.2.4. Other NPDES-permitted discharges

Discharges of stormwater or wastewater authorized by and in compliance with a different NPDES permit may be mixed with discharges authorized by this permit.

1.3. Limitations on Coverage

Except for discharges from support activities, as described in Section 1.2.2 and non-stormwater discharges listed in Section 1.2.3, all discharges covered by this permit shall be composed entirely of stormwater. This permit does not authorize the following discharges:

- a) Post-construction discharges - Stormwater discharges associated with permanent stormwater management structures after construction activities have been completed, the site has undergone final stabilization and the coverage under this permit has been terminated.
- b) Discharges mixed with non-stormwater - Discharges that are mixed with sources of non-stormwater, other than discharges which are identified in Section 1.2.4 (*Other NPDES-permitted discharges*) and in compliance with Section 3.5.9 (*Pollution prevention measures for non-stormwater discharges*) of this permit.

- c) Discharges covered by another permit - Discharges associated with construction activities that have been issued an individual permit in accordance with Subpart 7.12 (*Individual Permit*).
- d) Discharges threatening water quality - Discharges from construction sites that the director determines will cause, or has the reasonable potential to cause or contribute to, violations of water quality standards. Where such a determination has been made, the division will notify the discharger in writing that an individual permit application is necessary as described in Subpart 7.12 (*Individual Permit*). The division may authorize coverage under this permit after appropriate controls and implementation procedures have been included in the SWPPP that are designed to bring the discharge into compliance with water quality standards.
- e) Discharges into waters with unavailable parameters - Discharges to waters with unavailable parameters that would cause measurable degradation of water quality for the parameter that is unavailable; or that would cause additional loadings of unavailable parameters that are bioaccumulative or that have criteria below method detection levels. Waters with unavailable parameters means any segment of surface waters that has been identified by the division as failing to support its designated classified uses. A discharge that complies with the additional requirements set forth in Subpart 5.4 is not considered to cause measurable degradation of waters with unavailable parameters, unless the division determines upon review of the SWPPP that there is a reason to limit coverage as set forth in Subpart 1.3(d) above and the SWPPP cannot be modified to bring the site into compliance.
- f) Discharges into Outstanding National Resource Waters - Discharges into waters that are designated by the Water Quality Control Board as Outstanding National Resource Waters (ONRW) pursuant to Tennessee Rules, Chapter 0400-40-03-.06(5).
- g) Discharges into Exceptional Tennessee Waters - Discharges that would cause more than de minimis degradation of water quality for any available parameter in waters designated by TDEC as Exceptional Tennessee Waters. A discharge that complies with the additional requirements set forth in Subpart 5.4 is not considered to cause more than de minimis degradation of available parameters unless the division determines upon review of the SWPPP that there is a reason to limit coverage as set forth in Subpart 1.3(d) above and the SWPPP cannot be modified to bring the site into compliance.
- h) Discharges not protective of aquatic threatened and endangered species, species deemed in need of management or special concern species - Discharges or discharge-related activities that are likely to jeopardize the continued existence of listed or proposed threatened or endangered aquatic species, or their critical habitat, under the Endangered Species Act (ESA), or other applicable state law or rule.

Discharges or conducting discharge related activities that will cause a prohibited take of federally listed aquatic species (as defined under Section 3 of the ESA and 50 CFR §17.3), unless such take is authorized under Sections 7 or 10 of the ESA.

Discharges or conducting discharge-related activities that will cause a prohibited “take” of state listed aquatic species (as defined in the Tennessee Wildlife Resources Commission Proclamation, Endangered or Threatened Aquatic Species, and in the Tennessee Wildlife Resources Commission Proclamation, Wildlife in Need of Management), unless such take is authorized under the provisions of T.C.A. § 70-8-106(e).

- i) Discharges from a new or proposed mining operation - Discharges from new or proposed mining operations are not authorized.

- j) Discharges negatively affecting a property on the National Historic Register - Discharges that would negatively affect a property that is listed or is eligible for listing in the National Historic Register maintained by the Secretary of Interior.
- k) Discharges into waters with an approved Total Maximum Daily Load - Discharges of a pollutant to waters for which there is an EPA-approved or established total maximum daily load (**TMDL**) for that pollutant, unless the SWPPP incorporates measures or controls consistent with the assumptions and requirements of the **TMDL**. If a specific wasteload allocation has been established that would apply to the discharge, that allocation must be incorporated into the **SWPPP** and steps necessary to meet that allocation must be implemented. If an EPA-approved or established **TMDL** has specified a general wasteload allocation applicable to construction stormwater discharges, but no specific requirements for construction sites have been identified, the permittee should consult with the division to confirm that adherence to a **SWPPP** that meets the requirements of this permit will be consistent with the approved **TMDL**. Where an EPA-approved or established **TMDL** has not specified a wasteload allocation applicable to construction stormwater discharges, but has not specifically excluded these discharges, adherence to a **SWPPP** that meets the requirements of the CGP will be assumed to be consistent with the approved **TMDL**. If the EPA-approved or established **TMDL** specifically precludes construction stormwater discharges, the **operator** is not eligible for coverage under the CGP.

1.4. Obtaining Permit Coverage

A complete NOI, **SWPPP** and application fee are required to obtain coverage under this general permit. Requesting coverage under this permit means that an applicant has examined a copy of this permit and thereby acknowledged the applicant's claim of ability to comply with permit terms and conditions. Upon completing NOI review, the division will:

- a) issue an NOC to the **operator** identified as the initial site-wide primary permittee on the NOI form (see Subpart 1.5 below - *Effective Date of Coverage*),
- b) publish new operators' supplemental NOI information on TDEC's dataviewer,
- c) notify the applicant of needed changes to their NOI submittal (see Section 2.6.3 below - *Application completeness*), or
- d) deny coverage under this general permit (see Subpart 7.12 below - *Individual Permit*).

1.4.1. Notice of Intent

Operators wishing to obtain coverage under this permit must submit a complete NOI in accordance with Part 2 below, using the NOI form provided in Appendix A of this permit. The division will review NOIs for completeness and accuracy and, when deemed necessary, investigate the proposed project for potential impacts to the **waters of the state**.

1.4.2. Stormwater Pollution Prevention Plan (SWPPP)

Operators wishing to obtain coverage under this permit must submit a site-specific **SWPPP** with the NOI. The **SWPPP**, developed and submitted by the site-wide permittee (typically the owner/developer who applies for coverage prior to project commencement¹), should address all construction-related activities from the date construction commences to the date of termination of permit coverage, to the maximum extent practicable. The **SWPPP** must address the total acreage

¹ See Subpart 2.1 on page 7 for a definition of a site-wide permittee.

planned to be disturbed (see definition for “disturbed area” in part 10), including any associated construction support activities (see Section 1.2.2 above). The **SWPPP** must be developed, implemented and updated according to the requirements in Part 3 below (*SWPPP Requirements*) and Subpart 2.3 below (*Responsibilities of Operators*). The **SWPPP** must be implemented prior to commencement of construction activities.

If the initial **SWPPP** does not address all activities until final stabilization of the site, an updated **SWPPP** or addendums to the plan addressing all aspects of current site disturbance must be prepared. An active, updated **SWPPP** must be in place for all disturbed portions of a site until each portion has been completed and finally stabilized.

Preparation and implementation of the **SWPPP** may be a cooperative effort with all **operators** at a site. New **operators** with design and operational control of their portion of the construction site are expected to adopt, modify, update and implement the comprehensive **SWPPP**. Primary permittees at the site may develop a **SWPPP** addressing only their portion of the project, as long as the proposed **Best Management Practices (BMPs)** are compatible with the comprehensive **SWPPP** and complying with conditions of this general permit.

Site operators who are building single family residential houses on at-grade lots (see Section 2.2.2 below) and who are submitting an application for coverage under this permit, may complete and submit Form CN-1249, the Stormwater Pollution Prevention Plan (SWPPP) for Single Family Residential Homebuilding Sites. This SWPPP template is available at http://tdec.tn.gov/etdec/DownloadFile.aspx?row_id=CN-1249. Form CN-1249 is not appropriate if significant grading of the lot or lots is necessary.

1.4.3. Permit application fee

The permit application fee should accompany the applicant’s NOI form. The fee is based on the total acreage planned to be disturbed (see definition of “disturbed area” in Part 10) by an entire construction project for which the applicant is requesting coverage, including any associated construction support activities (see Section 1.2.2 above). The applicant may present documentation of common areas in the project that will not be subject to disturbance at any time during the life of the project and have these areas excluded from the fee calculation.

The application fees shall be as specified in Tennessee Rules, Chapter **0400-40-11**. The application will be deemed incomplete until the appropriate application fee is paid in full. Checks for the appropriate fee should be made payable to “Treasurer, State of Tennessee.” Electronic payment methods, if made available by the State of Tennessee, are deemed acceptable. The following conditions apply:

- If a project was previously permitted, but permit coverage was terminated (see Section 8.1.1 below - Termination process for primary permittees), and subsequent site disturbance or re-development occurs, the new **operator** must obtain coverage and pay the appropriate fee for the disturbed acreage.
- New primary operators must pay the fee applicable to projects seeking subsequent coverage under an actively covered larger common plan of development or sale.
- Areas not covered by the original application shall be covered under a separate tracking number and a new application fee shall be paid based on the new acreage to be covered.
- Please note that in addition to the application fee, an annual maintenance fee applies per Rule 0400-40-11-.02(12)(i).

1.4.4. Submittal of a documents to local municipalities

Permittees who discharge stormwater through an NPDES-permitted municipal separate storm sewer system ([MS4](#)) who are not exempted in section 1.4.5 below (*Permit coverage through Qualifying Local Program*) must submit a copy of the notice of coverage NOC, and at project completion, a copy of the signed NOT to the [MS4](#) upon its request. Permitting status of all permittees covered, or previously covered, under this general permit as well as the most current list of all [MS4](#) permits is available at <http://tn.gov/environment/article/tdec-dataviewers>.

1.4.5. Permit coverage through Qualifying Local Program

Coverage equivalent to coverage under this general permit may be obtained from a qualifying local erosion prevention and sediment control [MS4](#) program. A Qualifying Local Program (QLP) is a municipal stormwater program implemented by an MS4 for stormwater discharges associated with construction activity that has been formally approved by the division. More information about Tennessee's QLP program and MS4 participants can be found at: <https://www.tn.gov/environment/article/tennessee-qualifying-local-program>.

If a construction site is within the jurisdiction of, and has obtained a notice of coverage from, a QLP, the [operator](#) is authorized to discharge stormwater associated with construction activity under this general permit without the submittal of an NOI, SWPPP or application fee to the division. Permitting of stormwater runoff from construction sites from federal or state agencies (e.g., Tennessee Department of Transportation and Tennessee Valley Authority) and the local [MS4](#) program itself will remain solely under the authority of TDEC.

The division may require any [operator](#) located within the jurisdiction of a QLP to obtain permit coverage directly from the division. The [operator](#) shall be notified in writing by the division that coverage by the QLP is no longer applicable and how to obtain coverage under this permit.

1.5. **Effective Date of Coverage**

1.5.1. Notice of Coverage

The NOC is a notice from the division to the initial site-wide primary permittee informing the applicant that the NOI, the [SWPPP](#), and the application fee were received and accepted, and stormwater discharges from a specified area of a construction activity have been approved under this general permit. The initial site-wide primary permittee is authorized to discharge stormwater associated with construction activity as of the effective date listed on the NOC.

For new operators seeking subsequent coverage under an existing tracking number, the division will not issue an NOC. New operators are covered under the permit when their permit record is published on TDEC's dataviewer as "active" and with an effective date.

Assigning a permit tracking number by the division to a proposed discharge from a construction site does not confirm or imply an authorization to discharge under this permit. The division reserves the right to deny coverage to artificial entities (e.g., corporations or partnerships, excluding entities not required to register with the Tennessee Secretary of State) that are not properly registered and in good standing (i.e., listed with an entity status of "active") with the Tennessee Secretary of State, Division of Business Services. The division also reserves the right

to issue permit coverage in the correct legal name of the individual or entity seeking coverage, including each general partner of a general partnership in addition to the general partnership.

If an Aquatic Resource Alteration Permit (ARAP) is required for a site proposed for active construction, the NOC will not be issued until an ARAP application is submitted and deemed complete by the division. The treatment and disposal of wastewater (e.g., sanitary wastewater) generated during and after the construction must be also addressed prior to issuance of the NOC. The NOC may be delayed until adequate wastewater treatment and accompanying permits are issued.

1.5.2. Permit tracking numbers

Construction sites covered under this permit will be assigned permit tracking numbers in the sequence TNR100001, TNR100002, etc. An [operator](#) presently permitted under a previous construction general permit shall be granted coverage under this new general permit. Permit tracking numbers assigned under a previous construction general permit will be retained (see section 2.4.1 below). An [operator](#) receiving new permit coverage will be assigned a new permit tracking number (see section 2.4.2 below).

2. NOTICE OF INTENT (NOI) REQUIREMENTS

2.1. Who Must Submit an NOI?

All site [operators](#) must submit an NOI form. “[Operator](#)” for the purpose of this permit and in the context of stormwater associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria:

- a) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g., subsequent builder), or the person who is the current owner of the construction site. This person is considered the primary permittee.
- b) The person has day-to-day operational control of the activities necessary to ensure compliance with the [SWPPP](#) or other permit conditions. This person is typically a contractor or a commercial builder hired by the primary permittee, and is considered a secondary permittee.

The site-wide permittee is the first primary permittee to apply for coverage at the site. There may be other primary permittees for a project, but there is only one site-wide permittee. Where there are multiple operators associated with the same project, all operators are required to obtain permit coverage. Once covered by a permit, all such operators are to be considered as co-permittees if their involvement in the construction activities affects the same project site, and are held jointly and severally responsible for complying with the permit.

2.2. Construction Site Operators

2.2.1. Owner/Developer

An owner or developer of a project is a primary permittee. This person has operational or design control over construction plans and specifications, including the ability to make modifications to

those plans and specifications. This person may include, but is not limited to, a developer, landowner, realtor, commercial builder, homebuilder, etc. and may be an individual, a corporate entity, or a governmental entity. An owner's or developer's responsibility to comply with requirements of this permit extends until permit coverage is terminated in accordance with requirements of Part 8 below.

2.2.2. Commercial builders

A commercial builder can be a primary or secondary permittee at a construction site.

A commercial builder who purchases one or more lots from a site-wide permittee for the purpose of constructing and selling a structure (e.g., residential house, non-residential structure, commercial building, industrial facility); and has design or operational control over construction plans and specifications is a primary permittee for that portion of the site. A commercial builder may also be hired by an end user, such as a lot owner who may not be a permittee. In either case, the commercial builder is considered a new [operator](#) and must submit a new NOI following requirements in Section 2.4.3 below.

The commercial builder may also be hired by the primary permittee or a lot owner to build a structure. In this case, the commercial builder signs the primary permittee's NOI and [SWPPP](#) as a contractor (see Section 2.2.3 below) and is considered a secondary permittee.

2.2.3. Contractors

A contractor is considered a secondary permittee. This person has day-to-day operational control of the activities necessary to ensure compliance with the [SWPPP](#) or other permit conditions (e.g., the contractor is authorized to direct workers at a site to carry out activities required by the [SWPPP](#) or comply with other permit conditions).

A contractor may be: a general contractor, a grading contractor, an erosion control contractor, a sub-contractor responsible for land disturbing activities or EPSC implementation and maintenance, or a commercial builder hired by the primary permittee. The contractor may need to include in their contract with the party that hired them specific details for the contractor's responsibilities concerning EPSC measures. This includes the ability of the contractor to make EPSC modifications. The contractor should sign the NOI and [SWPPP](#) associated with the construction project at which they will be an operator.

2.3. **Responsibilities of Operators**

A permittee may meet one or more of the operational control components in the definition of "[operator](#)" found in Subpart 2.1 above. Either Section 2.3.1 or 2.3.2 below, or both, will apply depending on the type of operational control exerted by an individual permittee.

2.3.1. Permittees with design control

Permittees with design control (i.e., operational control over construction plans and specifications) at the construction site, including the ability to make modifications to those plans and specifications, must:

- a) ensure the project specifications they develop meet the minimum requirements of Part 3 below (stormwater pollution prevention plan - [SWPPP](#)) and all other applicable conditions;
- b) ensure the [SWPPP](#) indicates the areas of the project where they have design control and ensure all other permittees implementing and maintaining portions of the [SWPPP](#) impacted by any changes they make to the plan are notified of such modifications in a timely manner;
- c) ensure that all common BMPs (i.e., sediment treatment basin and drainage structures) necessary for the prevention of erosion or control of sediment are maintained and effective until all construction is complete and all disturbed areas in the entire project are stabilized, unless permit coverage has been obtained and responsibility has been taken over by a new primary permittee; and
- d) ensure that all [operators](#) on the site have permit coverage, if required, and are complying with the [SWPPP](#).

If parties with day-to-day operational control of the construction site have not been identified at the time the comprehensive [SWPPP](#) is initially developed, the permittee with design control shall be considered to be the responsible person until a supplemental NOI is submitted identifying the new operators (see Section 2.4.3 below). These new [operators](#) (e.g., general contractor, utilities contractors, sub-contractors, erosion control contractors, hired commercial builders) are considered secondary permittees. The [SWPPP](#) must be updated to reflect the addition of new [operators](#).

2.3.2. Permittees with day-to-day operational control

Permittees with day-to-day operational control of the activities necessary to ensure compliance with the [SWPPP](#) or other permit conditions must:

- a) ensure the [SWPPP](#) for portions of the project where they are operators meets the requirements of Part 3 below (*SWPPP Requirements*) and identifies the parties responsible for implementing the control measures identified in the plan;
- b) ensure the [SWPPP](#) indicates areas of the project where they have operational control over day-to-day activities; and
- c) ensure that measures in the [SWPPP](#) are adequate to prevent erosion and control any sediment that may result from their earth disturbing activity.

Permittees with operational control over only a portion of a larger construction project are responsible for compliance with all applicable terms and conditions of this permit as it relates to their activities on their portion of the construction site. This includes, but is not limited to, implementation of [Best Management Practices \(BMPs\)](#) and other controls required by the [SWPPP](#). Permittees shall ensure either directly or through coordination with other permittees, that their activities do not render another person's pollution control ineffective. All permittees must implement their portions of a comprehensive [SWPPP](#).

2.4. NOI Submittal

2.4.1. Existing sites

An [operator](#) presently permitted under the 2011 construction general permit shall be granted coverage under this new general permit.² There will be no additional fees associated with an extension of coverage for existing sites under the new permit. The division may, at its discretion, require permittees to confirm their intent to be covered under this new general permit following its effective date through submission of an updated NOI. If the confirmation is required but not received by the division, coverage under the new general permit will be terminated. If a site with terminated coverage is unstable or if construction continues, a new NOI, [SWPPP](#), and application fee must be submitted.

2.4.2. New sites or New Phases of Existing Sites

Except as provided in Section 2.4.3 below, [operators](#) must submit a complete NOI, [SWPPP](#) and an application fee in accordance with the requirements described in Subpart 1.4 above. The complete application should be submitted at least 30 days prior to commencement of construction activities. The permittee is authorized to discharge stormwater associated with construction activity as of the effective date listed on the NOC. The land disturbing activities shall not start until a NOC is prepared and written approval by the division staff is obtained according to Subpart 1.5 above.

2.4.3. New operators

A supplemental NOI should be submitted as soon as practicable before a new [operator](#) commences work at a site with existing coverage. The supplemental NOI must reference the project name and tracking number assigned to the primary permittee's NOI.

A new operator working as a residential home builder may submit Form CN-1249, the Stormwater Pollution Prevention Plan (SWPPP) for Single Family Residential Homebuilding Sites. This form may be found at http://tdec.tn.gov/etdec/DownloadFile.aspx?row_id=CN-1249 (see Section 1.4.2 above).

The NOI may not need to be submitted immediately upon assuming operational control if the portion of the site controlled by the new operator is inactive and all of the previously disturbed areas are stabilized. However, the division should be notified if a new [operator](#) obtains operational control at a site, but commencement of construction under the direction of the [operator](#) at the site is going to be delayed.

If the primary permittee's company name has changed (but not the site ownership or authorized signatories), an updated NOI should be submitted to the division within 30 days of the name change, along with documentation that the name change has been properly registered with the Tennessee Secretary of State, Division of Business Services. If the new [operator](#) agrees to comply

² If the existing permittee is an artificial person (e.g., a partnership or corporation, excluding entities not required to register with the Tennessee Secretary of State), the division reserves the right to deny coverage under this new general permit if the permittee is not registered and in good standing (i.e., listed with an entity status of "active") with the Tennessee Secretary of State, Division of Business Services. The division further reserves the right to convert permit coverage to the correct legal name of the permittee and to name each general partner of a general partnership in addition to the general partnership.

with an existing comprehensive [SWPPP](#) already implemented at the site, a copy of the supplemental or modified [SWPPP](#) does not have to be submitted with the NOI.

If the transfer of ownership is due to foreclosure or a permittee filing for bankruptcy proceedings, the new owner (e.g., a lending institution) must obtain permit coverage if the property is inactive, but is not stabilized sufficiently. If the property is sufficiently stabilized permit coverage may not be necessary, unless and until construction activity at the site resumes.

2.4.4. Late NOIs

Dischargers are not prohibited from submitting late NOIs. When a late NOI is submitted, and if the division authorizes coverage under this permit, such authorization is only for future discharges. Any prior, unpermitted, discharges or permit noncompliances are subject to penalties as described in Section 7.1.2 below.

2.5. **Who Must Sign the NOI?**

All construction site [operators](#) as defined in Subpart 2.2 above (*Construction Site Operators*) must sign the NOI form. Signatory requirements for a NOI are described in Section 7.7.1 below. All signatures must be original. An NOI that does not bear an original signature will be deemed incomplete.

2.6. **NOI Form**

2.6.1. Contents of the NOI form

The NOI for construction projects shall be submitted on the form provided in Appendix A of this permit. This form and its instructions set forth the required content of the NOI. The NOI form must be filled in completely. If sections of the NOI are left blank, a narrative explaining the omission must be provided as an attachment.

Owners, developers and contractors that meet the definition of the [operator](#) in Subpart 2.2 above (*Construction Site Operators*) shall apply for permit coverage on the same NOI, if possible. The division may accept separate NOI forms from different [operators](#) for the same construction site when warranted.

After permit coverage has been granted to the primary permittee, any subsequent NOI submittals must include the site's previously assigned permit tracking number and the project name. The [SWPPP](#) shall be prepared in accordance with Part 3 below, and must be submitted with the NOI unless the NOI is only being submitted to add a secondary permittee to an existing coverage.

2.6.2. Construction site map

An excerpt (8 ½" by 11" or 11" by 17") from the appropriate 7.5 minute [United States Geological Survey](#) (USGS) topographic map, a city map, or a county map with the proposed construction site centered, must be included with the NOI. The entire proposed construction area must be outlined in red on the map. The total acreage to be disturbed should be included on the map. All outfalls discharging runoff from the property should be identified. Streams receiving the discharge and storm sewer systems conveying the discharge from outfalls should be clearly identified and marked on the map. NOIs for [linear projects](#) must specify the location of each end of the construction area and all areas to be disturbed. Commercial builders that develop separate

SWPPPs that cover only their portion of the project shall also submit a site or plat map that clearly indicates the lots for which they are applying for permit coverage, and the location of EPSCs that will be used at each lot (see Section 1.4.2 above).

2.6.3. Application completeness

The division recommends that all applicants use the Notice of Intent (NOI) & Stormwater Pollution Prevention Plan (SWPPP) Checklist (see Appendix D) to check the completeness of their submittal.

Based on a review of the NOI and other available information, the division shall, within 30 days:

- a) issue an NOC to the initial site-wide primary operator for the construction site (see Subpart 1.5 above),
- b) publish new operators' supplemental NOI information on TDEC's dataviewer,
- c) prepare a deficiency letter stating additional information must be provided before the NOC can be issued, or
- d) deny coverage under this general permit and require the discharger to obtain coverage under an individual NPDES permit (see Subpart 7.12 below).

2.7. **Where to Submit the NOI, SWPPP and Application Fee**

The applicant shall submit the NOI, SWPPP, and application fee to the appropriate TDEC Environmental Field Office (EFO) for the county where the construction activity is located and where stormwater discharges enters [waters of the state](#). If a site straddles a county line of counties that are in different EFO service areas, the [operators](#) shall send the NOI and the application fee to the EFO that provides coverage for the majority of the proposed construction activity.

A list of counties and the corresponding EFOs is provided in Subpart 2.8 below. The division's Nashville Central Office will serve as a processing office for NOIs submitted by federal or state agencies (e.g., TDOT, TVA and the local [MS4](#) programs).

2.8. **List of the TDEC Environmental Field Offices (EFOs) and Corresponding Counties**

EFO Name	List of Counties
Chattanooga	Bledsoe, Bradley, Grundy, Hamilton, Marion, McMinn, Meigs, Polk, Rhea, Sequatchie
Columbia	Bedford, Coffee, Franklin, Giles, Hickman, Lawrence, Lewis, Lincoln, Marshall, Maury, Moore, Perry, Wayne
Cookeville	Cannon, Clay, Cumberland, De Kalb, Fentress, Jackson, Macon, Overton, Pickett, Putnam, Smith, Van Buren, Warren, White
Jackson	Benton, Carroll, Chester, Crockett, Decatur, Dyer, Gibson, Hardeman, Hardin, Haywood, Henderson, Henry, Lake, Lauderdale, Madison, McNairy, Obion, Weakley
Johnson City	Carter, Greene, Hancock, Hawkins, Johnson, Sullivan, Unicoi, Washington
Knoxville	Anderson, Blount, Campbell, Claiborne, Cocke, Grainger, Hamblen, Jefferson, Knox, Loudon, Monroe, Morgan, Roane, Scott, Sevier, Union
Memphis	Fayette, Shelby, Tipton
Nashville	Cheatham, Davidson, Dickson, Houston, Humphreys, Montgomery, Robertson, Rutherford, Stewart, Sumner, Trousdale, Williamson, Wilson

TDEC may be reached by telephone at the toll-free number 1-888-891-8332 (TDEC). Local EFOs may be reached directly when calling this number from the construction site, using a land line.

3. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS

3.1. The General Purpose of the SWPPP

A [SWPPP](#) must be prepared and submitted along with the NOI as required in Section 1.4.2 above. The primary permittee must implement the [SWPPP](#) as written from commencement of construction activity until final stabilization is complete, or until the permittee does not have design or operational control of any portion of the construction site. Requirements for termination of site coverage are provided in Part 8 below.

A site-specific [SWPPP](#) must be developed for each construction project or site covered by this permit. The design, inspection and maintenance of [Best Management Practices \(BMPs\)](#) described in the [SWPPP](#) must be prepared in accordance with good engineering practices. At a minimum, [BMPs](#) shall be consistent with the requirements and recommendations contained in the current edition of the [Tennessee Erosion and Sediment Control Handbook](#) (the handbook). The handbook is designed to provide information to planners, developers, engineers, and contractors on the proper selection, installation and maintenance of [BMPs](#). This permit allows the use of innovative or alternative [BMPs](#), whose performance has been documented to be equivalent or superior to conventional [BMPs](#) as certified by the [SWPPP](#) designer.

Once a definable area has been finally stabilized, the permittee may identify this area on the [SWPPP](#). No further [SWPPP](#) or inspection requirements apply to that portion of the site (e.g., earth-disturbing activities around one of three buildings in a complex are done and the area is finally stabilized, one mile of a roadway or pipeline project is done and finally stabilized, etc.).

For more effective coordination of [BMPs](#) a cooperative effort by the different [operators](#) at a site to prepare and participate in a comprehensive [SWPPP](#) is expected. Primary permittees at a site may develop separate [SWPPPs](#) that cover only their portion of the project. In instances where there is more than one [SWPPP](#) for a site, the permittees must ensure the stormwater discharge controls and other measures are compatible with one another and do not prevent another [operator](#) from complying with permit conditions. The comprehensive [SWPPP](#) developed and submitted by the primary permittee must assign responsibilities to secondary permittees and coordinate all [BMPs](#) at the construction site. Assignment and coordination can be done by name or by job title.

3.1.1. Registered engineer or landscape architect requirement

The narrative portion of the [SWPPP](#) shall be prepared by an individual who has a working knowledge of erosion prevention and sediment controls, such as (but not limited to) a Certified Professional in Erosion and Sediment Control ([CPESCC](#)) or a person that successfully completed the "[Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites](#)" course.

Plans and specifications for any building or structure, including the design of sediment basins or other sediment controls involving structural, hydraulic, hydrologic or other engineering calculations shall be prepared by a licensed professional engineer or landscape architect and

stamped and certified in accordance with the [Tennessee Code Annotated](#), Title 62, Chapter 2 (see Part 10 below) and the rules of the [Tennessee Board of Architectural and Engineering Examiners](#). Engineering design of sediment basins and other sediment controls must be included in [SWPPPs](#) for construction sites involving drainage to an outfall totaling 10 or more acres (see Subsection 3.5.3.3 below) or 5 or more acres if draining to waters with unavailable parameters or Exceptional Tennessee Waters (see Section 5.4.1 below).

3.1.2. Site assessment

Quality assurance of erosion prevention and sediment controls (EPSCs) shall be done by performing site assessments. The site assessment shall be conducted at each outfall draining 10 or more acres (see Subsection 3.5.3.3 below) or 5 or more acres if draining to waters with unavailable parameters or Exceptional Tennessee Waters (see Section 5.4.1 below). Site assessments shall cover the entire disturbed area and occur within 30 days of construction commencing at each portion of the site that drains the qualifying acreage. The site assessment shall be performed by individuals with one or more of the following qualifications:

- a) A licensed professional engineer or landscape architect.
- b) A Certified Professional in Erosion and Sediment Control ([CPESC](#)).
- c) A person who has successfully completed the “[Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites](#)” course.

At a minimum, site assessments should be performed to verify the installation, functionality and performance of the EPSC measures described in the [SWPPP](#). If structural BMPs (or equivalent EPSC measures) are not constructed or construction is in progress at the time of the site assessment, a follow-up monthly assessment(s) are required until the BMPs are constructed per the [SWPPP](#). The site assessment should be performed with the inspector (as defined in Part 10 below) and should include a review and update (if applicable) of the [SWPPP](#). Modifications of plans and specifications for any building or structure, including the design of sediment basins or other sediment controls involving structural, hydraulic, hydrologic or other engineering calculations shall be prepared by a licensed professional engineer or landscape architect and stamped and certified in accordance with the [Tennessee Code Annotated](#), Title 62, Chapter 2 (see Part 10 below) and the rules of the [Tennessee Board of Architectural and Engineering Examiners](#).

The site assessment findings shall be documented and the documentation kept with the field [SWPPP](#) at the site. At a minimum, the documentation shall include information required in the inspection form provided in Appendix C of this permit, an assessment of any failing or unmaintained EPSCs, causes of failure and any action necessary to bring the site into compliance with this permit. The documented quality assurance site assessments shall also indicate if all EPSCs have been installed as designed in the submitted SWPPP and EPSC plans; and, if not, measures that need to be taken so those EPSCs meet the design specifications in the field SWPPP and EPSC plans. The documentation must contain the printed name and signature of the individual performing the site assessment and the following certification:

“I certify under penalty of law that this report and all attachments are, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.”

The site assessment can take the place of one of the twice weekly inspections required in Subsection 3.5.8.2 below if the entire site is inspected during the assessment.

The division may require additional site assessments to be performed if site inspections by division personnel reveal site conditions that have potential of causing pollution to [waters of the state](#).

3.2. SWPPP Preparation and Compliance

3.2.1. Existing sites

Operators of an existing site presently permitted under the division's 2011 construction general permit shall maintain full compliance with the current [SWPPP](#). The current [SWPPP](#) should be modified, if necessary, to meet requirements of this new general permit, and the [SWPPP](#) changes implemented no later than 12 months following the new permit effective date. The permittee shall make the updated [SWPPP](#) available for the division's review upon request.

3.2.2. New sites or New Phases of Existing Sites

For construction stormwater discharges not authorized under an NPDES permit as of the effective date of this permit, a [SWPPP](#) that meets the requirements of Subpart 3.5 below of this permit shall be prepared and submitted along with the NOI and an appropriate fee for coverage under this permit.

3.3. Signature Requirements, SWPPP Review and Making Plans Available

3.3.1. Signature requirements

The [SWPPP](#) shall be signed by the operators in accordance with Subpart 7.7 below, and if applicable, certified according to requirements in Section 3.1.1 above. All signatures must be original. Electronic signatures are deemed equivalent to original signatures. A [SWPPP](#) that does not bear an original signature or an electronic signature will be deemed incomplete.

3.3.2. SWPPP review

The permittee shall make updated plans and inspection reports available upon request to the director; the local agency approving erosion prevention and sediment control plans, grading plans, land disturbance plans or stormwater management plans; or the operator of an [MS4](#).

3.3.3. Making plans available

A copy of the current version of the [SWPPP](#) shall be retained on-site at the location which generates the stormwater discharge in accordance with Part 6 below of this permit. If the site is inactive or does not have an onsite location adequate to store the [SWPPP](#), the location of the [SWPPP](#), along with a contact phone number, shall be posted on-site. If the [SWPPP](#) is located off-site, reasonable local access to the plan, during normal working hours, must be provided.

3.4. Keeping Plans Current

3.4.1. SWPPP modifications

The permittee must modify and update the [SWPPP](#) if any of the following conditions apply:

- a) Whenever there is a change in the scope of the project that would be expected to have a significant effect on the discharge of pollutants to the [waters of the state](#) and which has not otherwise been addressed in the [SWPPP](#). If applicable, the SWPPP must be modified or updated whenever there is a change in chemical treatment methods, including the use of different treatment chemical, different dosage or application rate or different area of application.
- b) Whenever inspections or investigations by site [operators](#); or local, state or federal officials indicate the [SWPPP](#) is proving ineffective in eliminating or significantly minimizing pollutants from sources identified under Section 3.5.2 below, or is otherwise not achieving the general objectives of controlling pollutants in stormwater discharges associated with construction activity. Where local, state or federal officials determine that the SWPPP is ineffective in eliminating or significantly minimizing pollutant sources, a copy of any correspondence to that effect must be retained in the SWPPP.
- c) Whenever any new [operator](#) (typically a secondary permittee) who will implement a measure of the [SWPPP](#) must be identified (see Subparts 2.1 and 2.2 above for further description of which [operators](#) must be identified).
- d) Whenever it is necessary to include measures intended to prevent a negative impact to legally protected state or federally listed fauna or flora (or species proposed for such protection – see Subpart 1.3 above). Amendments to the [SWPPP](#) may be reviewed by the division, a local [MS4](#), the EPA, or an authorized regulatory agency.
- e) Whenever a TMDL is developed for the receiving waters for a pollutant of concern (e.g., siltation and habitat alterations due to in-channel erosion).

3.5. Components of the SWPPP

The [SWPPP](#) shall include the following items, as described in Sections 3.5.1 to 3.5.10 below: a site description; a description of stormwater runoff controls, erosion prevention and sediment control measures, stormwater management measures, and a description of any other items needing control; approved local government sediment and erosion control requirements; maintenance and inspection requirements; pollution prevention measures for non-stormwater discharges and documentation of permit eligibility related to Total Maximum Daily Loads ([TMDL](#)). The [SWPPP](#) must:

- a) identify all potential sources of pollutants likely to affect the quality of stormwater discharges from the construction site,
- b) describe practices to be used to reduce pollutants in stormwater discharges from the construction site, and
- c) assure compliance with the terms and conditions of this permit.

3.5.1. Site description

Each SWPPP shall provide a description of pollutant sources and other information as indicated below:

- a) A description of all construction activities at the site, not just grading and street construction.
- b) The intended sequence of activities which disturb soils for major portions of the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation).
- c) Estimates of the total area of the site and the total area that is expected to be disturbed by excavation, grading, filling or other construction activities.
- d) A description of the topography of the site, including an estimation percent slope and the variation in percent slope found on the site. The estimate should be on a basis of a drainage area serving each outfall, rather than an entire project.
- e) An estimate of drainage area (acres) serving each outfall.
- f) Data describing the soil, how the soil type will dictate the needed control measures and how the soil may affect the expected quality of runoff from the site. The data may be referenced or summarized.
- g) An estimate of the runoff coefficient of the site after construction activities are completed and a description of how the runoff will be handled to prevent erosion at the permanent outfall and receiving stream. The estimate of the percentage of impervious area before and after construction must also be provided.
- h) An erosion prevention and sediment control plan with the proposed construction area clearly outlined. The plan should indicate the boundaries of the permitted area, drainage patterns, approximate slopes anticipated after major grading activities, areas of soil disturbance, an outline of areas which are not to be disturbed, the location of major structural and nonstructural controls identified in the [SWPPP](#), the location of areas where stabilization practices are expected to occur, surface waters including wetlands and sinkholes, and identification on the erosion control plan of outfall points intended for coverage. The erosion control plan must meet requirements stated in Section 3.5.2 below.
- i) A description of any discharge associated with industrial activity other than construction stormwater that originates on site and the location of that activity and its permit number.
- j) Identification of any stream or wetland on or adjacent to the project, a description of any anticipated alteration of these waters and the permit number or the tracking number of the [Aquatic Resources Alteration Permit](#) (ARAP) or Section 401 Certification issued for the alteration.
- k) The name of the receiving waters and identification if those receiving waters have unavailable parameters for siltation and habitat alterations due to in-channel erosion or are Exceptional Tennessee Waters.
- l) If applicable, clearly identify and outline the [buffer zones](#) established to protect [waters of the state](#) located within the boundaries of the project.
- m) A description of lot-level EPSC measures to be implemented when a lot, or lots, at a subdivided construction project is sold to a new owner prior to the completion of construction. Subdivided construction projects may include residential or commercial subdivisions and industrial parks. The new operator must obtain coverage under this permit once the property is sold.
- n) A description of the construction phasing for projects of more than 50 acres (see Subsection 3.5.3.1 below).
- o) A description of the protections (e.g., caution fencing or stream side buffer zones) employed to limit the disturbance if only a portion of the total acreage of the construction site is to be disturbed. The limits of disturbance shall be clearly identified in the [SWPPP](#) and the areas to be undisturbed clearly marked in the field before construction activities begin.

3.5.2. Description of stormwater runoff controls

The [SWPPP](#) shall include a description of appropriate erosion prevention and sediment controls and other [Best Management Practices \(BMPs\)](#) that will be implemented at the construction site. The [SWPPP](#) must clearly describe each activity which disturbs soils for major portions of the site (e.g., grubbing, excavation, grading, utilities and infrastructure installation). The [SWPPP](#) must also describe:

- a) appropriate control measures and the general timing for the measures to be implemented during construction activities, and
- b) which permittee is responsible for implementation of which controls.

The [SWPPP](#) must include EPSC plans showing the approximate location of each control measure and a description of when the measure will be implemented during the construction process (e.g., prior to the start of earth disturbance, as the slopes are altered and after major grading is finished). The different stages of construction and the EPSC measures that will be utilized during each stage should be depicted on multiple plan sheets as described below. Half sheets are acceptable. One sheet showing the combined EPSCs that will be used during the life of a multi-phase project will not be considered complete.

At least two separate EPSC plan sheets shall be developed for site disturbances less than five acres. The first plan sheet will address the EPSC measures necessary to manage stormwater runoff, erosion and sediment during the initial land disturbance, or grading, stage. The second plan sheet will address the EPSC measures necessary to manage stormwater runoff, erosion and sediment during the final grading stage.

At least three separate EPSC plan sheets shall be developed for site disturbances of five or more acres. In addition to the two plan sheets described above, a third plan sheet will address the EPSC measures necessary to manage stormwater runoff, erosion and sediment during any interim grading stages.

The description and implementation of controls shall address the following minimum components, as described in Sections 3.5.3, 3.5.4 and 3.5.5 below. Additional controls may be necessary to comply with Section 5.3.2 below.

3.5.3. Erosion prevention and sediment control

3.5.3.1. General criteria and requirements

- a) The construction-phase erosion prevention controls shall be designed to eliminate (or minimize if complete elimination is not possible) the dislodging and suspension of soil in water. Sediment controls shall be designed to retain mobilized sediment on site to the maximum extent practicable.
- b) The design, inspection and maintenance of [Best Management Practices \(BMPs\)](#) described in the [SWPPP](#) must be prepared in accordance with good engineering practices and, at a minimum, shall be consistent with the requirements and recommendations contained in the current edition of the [Tennessee Erosion and Sediment Control Handbook](#). In addition, all control measures must be properly selected, installed and maintained in accordance with the manufacturer's specifications, where applicable. All control measures selected must be able to slow runoff so that rill and gully formation is prevented. When [steep slopes](#) or fine particle soils are present at the site, additional

physical or chemical treatment of stormwater runoff may be required. Proposed physical or chemical treatment must be researched and applied according to the manufacturer's guidelines and fully described in the SWPPP. If periodic inspections or other information indicates a control has been used inappropriately, or incorrectly, the permittee must replace or modify the control.

Chemicals used for treating stormwater runoff must be shown to be non-toxic to sensitive aquatic species through a 48-hour or 96-hour acute toxicity test as reported in the product's Material Safety Data Sheets. The chemical feed rate shall be such that the effluent concentration of the product is lower than the LC50 toxicity value for sensitive aquatic species as reported in the products Material Safety Data Sheets. Calculations used to determine the chemical feed rate so that runoff or effluent is not toxic to sensitive aquatic species shall also be included in the SWPPP. Chemicals used for treating stormwater runoff shall be applied in accordance with manufacturer specifications and securely stored on-site in the contractor's staging and storage area if not stored off-site or provided by others. Chemicals shall not be applied directly to any stream.

- c) The timing of the planting of the vegetation cover must be discussed in the [SWPPP](#) if permanent or temporary vegetation is to be used as a control measure. Planting cover vegetation during winter months or dry months should be avoided.
- d) If sediment escapes the permitted area, off-site accumulations that have not reached a stream must be removed at a frequency sufficient to minimize off-site impacts (e.g., sediment that has escaped a construction site and collected in a street must be removed so that it does not subsequently wash into storm sewers and streams during the next rain or so that it does not pose a safety hazard to users of public streets). Permittees shall not initiate remediation or restoration of a stream without consulting the division first. This permit does not authorize access to private property. Arrangements concerning the removal of sediment on adjoining property must be settled by the permittee and the adjoining landowner.
- e) Sediment should be removed from sediment traps, silt fences, sedimentation basins and other sediment controls as recommended in the [Tennessee Erosion and Sediment Control Handbook](#). Sediment must be removed when design capacity has been reduced by 50%.
- f) Litter, construction debris and construction chemicals exposed to stormwater shall be picked up prior to storm events or before being carried off of the site by wind so that they do not become a pollutant source for stormwater discharges. Erosion prevention and sediment control materials (e.g., silt fence) should be removed or otherwise prevented from becoming a pollutant source for stormwater discharges.
- g) Erodible material storage areas (e.g., overburden and stockpiles of soil) and borrow pits that are used primarily for the permitted project and are contiguous to the site are considered a part of the site and shall be identified on the NOI, addressed in the [SWPPP](#) and included in the fee calculation. TDOT projects shall be addressed in the [Waste and Borrow Manual](#) per the [Statewide Stormwater Management Plan \(SSWMP\)](#).
- h) Pre-construction vegetative ground cover shall not be destroyed, removed or disturbed more than 14 days prior to grading or earth moving activities unless the area is subsequently temporarily or permanently stabilized.
- i) Clearing and grubbing must be held to the minimum necessary for grading and equipment operation. Existing vegetation at the site should be preserved to the maximum extent practicable.
- j) Construction must be sequenced to minimize the exposure time of graded or denuded areas.

- k) Construction phasing is recommended on all projects regardless of size as an effective practice for minimizing erosion and limiting sedimentation. Construction must be phased to keep the total [disturbed area](#) less than 50 acres at any one time. Areas of the completed phase must be stabilized within 14 days (see Subsection 3.5.3.2 below). No more than 50 acres of active soil disturbance is allowed at any time during the construction project. This includes off-site borrow or disposal areas that meet the conditions of Section 1.2.2 above.

The 50 acre limitation does not apply to [linear construction projects](#) (e.g., roadway, pipeline and other infrastructure construction activities) if the following conditions are met:

- i. Where no one area of active soil disturbance is greater than 50 acres and the various areas of disturbance have separate receiving waterbodies.
- ii. Where contiguous disturbances amount to greater than 50 acres, but no single waterbody is receiving runoff from more than 50 disturbed acres.
- iii. With the department's written concurrence, where more than 50 acres of disturbance is to occur and where a single waterbody will receive runoff from more than 50 acres.
- iv. Where no one area of active soil disturbance is greater than 50 acres and the various areas of disturbance are more than 5 miles apart.

In order for a [linear project](#) to take advantage of the 50 acre rule exemption outlined in this paragraph, the contractor shall conduct monthly site assessments as described in Section 3.1.2 above until the site is permanently stabilized.

- l) EPSC measures must be in place and functional before earth moving operations begin, and must be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the workday, but must be replaced at the end of the workday.
- m) The following records shall be maintained on or near the site: the dates when major grading activities occur; the dates when construction activities temporarily or permanently cease on a portion of the site; the dates when stabilization measures are initiated; inspection records and rainfall records.
- n) Off-site vehicle tracking of sediment and the generation of dust shall be minimized. A stabilized construction access shall be described and implemented, as needed, to reduce the tracking of mud and dirt onto public roads by construction vehicles.
- o) Permittees shall maintain a rain gauge and daily rainfall records at the site, or use a reference site for a record of daily precipitation.

3.5.3.2. Stabilization practices

The [SWPPP](#) shall include a description of temporary and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans should ensure that existing vegetation is preserved when possible. Stabilization practices may include: temporary seeding, permanent seeding, mulching, geotextiles, sod stabilization, vegetative buffer strips, protection of trees and the preservation of mature vegetation.. Use of impervious surfaces for final stabilization in lieu of a permanent vegetative cover should be avoided where practicable. No stabilization control measures or EPSC measures are to be installed in a stream without obtaining a Section 404 permit and an [Aquatic Resources Alteration Permit](#) (ARAP).

Stabilization measures shall be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased. Temporary or permanent soil stabilization at the construction site must be completed no later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. In the following situations, [temporary stabilization](#) measures are not required:

- a) Where the initiation of stabilization measures is precluded by snow cover or frozen ground conditions or adverse soggy ground conditions, stabilization measures shall be initiated as soon as practicable.
- b) Where construction activity on a portion of the site is temporarily ceased, but soil disturbing activities will resume within 14 days.

[Steep slopes](#) shall be stabilized no later than seven days after construction activity on the slope has temporarily or permanently ceased.

Permanent stabilization with perennial vegetation (using native herbaceous and woody plants where practicable) or other permanently stable, non-eroding surface shall replace any temporary measures as soon as practicable. Unpacked gravel containing fines (silt and clay sized particles) or crusher runs will not be considered a non-eroding surface.

3.5.3.3. Structural practices

The [SWPPP](#) shall include a description of structural practices to divert flows from exposed soils, store flows or otherwise limit runoff and discharge of pollutants from exposed areas of the site. Such practices may include silt fences, earth dikes, drainage swales, sediment traps, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, reinforced soil retaining systems, gabions and temporary or permanent sediment basins. Structural controls shall not be placed in streams or wetlands except as authorized by a section 404 permit and/or [Aquatic Resources Alteration Permit](#) (ARAP).

EPSC measures must be prepared in accordance with good engineering practices and the latest edition of the [Tennessee Erosion and Sediment Control Handbook](#). In addition, EPSC measures shall be designed to minimize erosion and maximize sediment removal resulting from a [2-year, 24-hour storm](#) (the design storm – see part 10 below: “2-year and 5-year design storm depths and intensities”), as a minimum, either from total rainfall in the designated period or the equivalent intensity as specified on the following website http://hdsc.nws.noaa.gov/hdsc/pfds/orb/tn_pfds.html. Chemical treatment of the stormwater runoff may be necessary to minimize the amount of sediment being discharged when clay and other fine particle soils or highly erodible soils are present at the construction site.

For an on-site outfall that receives drainage from 10 or more acres, a minimum sediment basin volume that will provide treatment for a calculated volume of runoff from a [2 year, 24 hour storm](#) and runoff from each acre drained, or equivalent control measures as specified in the [Tennessee Erosion and Sediment Control Handbook](#), shall be provided until final stabilization of the site.³ A drainage area of 10 or more acres includes disturbed and undisturbed portions of the site and areas adjacent to the site, all draining through the common outfall. Where an equivalent control

³ Two principal objectives in sediment basin design should be recognized: (a) lower wet and dry sediment treatment storage with a permanent pool, with a total minimum volume below the principal spillway riser crest of 134 yd³/acre (b) upper hydrologic storage (i.e., 2-yr or 5-yr and 25-yr, 24-hr storms) for designing hydraulic controls such as principal and emergency spillways.

measure is substituted for a sediment retention basin, the equivalency must be justified to the division. Runoff from any undisturbed acreage should be diverted around the [disturbed area](#) and the sediment basin. Diverted runoff can be omitted from the volume calculation. Sediment storage expected from the disturbed areas must be included.

All calculations of drainage areas, runoff coefficients and basin volumes must be provided in the [SWPPP](#). The discharge structure from a sediment basin must be designed to retain sediment during the lower flows. Muddy water to be pumped from excavation and work areas must be held in settling basins, filtered or chemically treated prior to its discharge into surface waters. Water must be discharged through a pipe, grassed or lined channel or other equivalent means so that the discharge does not cause erosion and sedimentation. Discharged water must not cause an objectionable color contrast with the receiving stream.

3.5.4. Stormwater management

The [SWPPP](#) shall include a description of any measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed, including a brief description of applicable State or local erosion and sediment control requirements.

For projects discharging to waters with unavailable parameters for siltation and habitat alterations due to in-channel erosion, the [SWPPP](#) shall include a description of measures that will be installed during the construction process to control pollutants and the increase in impervious area after the construction addressed in the permit application is completed, the nature of fill material and existing data describing the soil or the quality of the discharge. The [SWPPP](#) shall also include a description of measures that will be installed to dissipate the volume and energy of the stormwater runoff to pre-development levels.

This permit only addresses the installation of stormwater management measures and not the ultimate operation and maintenance of such structures after the construction activities have been completed, the site has undergone final stabilization and the permit coverage has been terminated. Permittees are only responsible for the operation and maintenance of stormwater management measures prior to final stabilization of the site and permit coverage being terminated. Permittees are not responsible for maintenance after permitted stormwater discharges associated with construction activity have been eliminated from the site. All permittees are encouraged to limit the amount of post construction runoff voluntarily, if not required by local building regulations or local [MS4](#) program requirements, to minimize in-stream channel erosion in the receiving stream.

Construction stormwater runoff management practices may include: stormwater detention structures, including ponds with a permanent pool; stormwater retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff onsite; and sequential systems, which combine several practices.

Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to provide a non-erosive velocity flow from the structure to the receiving stream so that the natural physical and biological characteristics and functions of the stream are maintained and protected (i.e., there should be no significant changes in the hydrological regime of the receiving water). The [SWPPP](#) shall include an explanation of the technical basis used to select the velocity dissipation devices to control pollution where flows exceed pre-development levels. The [Tennessee Erosion and Sediment Control Handbook](#) provides measures that can be incorporated into the design or implemented on site to decrease erosive velocities. An [Aquatic](#)

[Resources Alteration Permit](#) (ARAP) may be required if such velocity dissipation devices installed would alter the receiving stream or its banks.

3.5.5. Other items needing control

- a) No solid materials, including building materials, shall be placed in [waters of the state](#), except as authorized by a section 404 permit and/or [Aquatic Resources Alteration Permit](#) (ARAP) (see Part 9 below).
- b) The [SWPPP](#) shall identify and provide the necessary EPSC measures for the installation of any waste disposal system, sanitary sewer or septic system. Permittees must also comply with applicable state and local waste disposal, sanitary sewer or septic system regulations as necessary.
- c) The [SWPPP](#) shall include a description of construction and waste materials expected to be stored on-site. The [SWPPP](#) shall also include a description of controls used to reduce pollution from materials stored on site. Controls may include storage practices to minimize exposure of the materials to stormwater or spill prevention and response.
- d) A description of stormwater sources from areas other than construction and a description of controls and measures that will be implemented at those sites.
- e) A description of measures necessary to prevent “taking” of legally protected state or federal listed threatened or endangered aquatic fauna and critical habitat, if applicable. The permittee must describe and implement such measures to maintain eligibility for coverage under this permit.

3.5.6. Approved local government sediment and erosion control requirements

Permittees must comply with any additional erosion prevention, sediment control and stormwater management measures required by a local municipality or permitted [MS4](#) program.

3.5.7. Maintenance

The [SWPPP](#) shall describe procedures to ensure that vegetation, erosion prevention and sediment control measures, [buffer zones](#) and other protective measures are kept in good and effective operating condition. Maintenance needs identified in inspections or by other means shall be accomplished before the next storm event, but in no case more than seven days after the need is identified.

3.5.8. Inspections

3.5.8.1. Inspector training and certification

Twice weekly inspections can be performed by:

- a) a person with a valid certification from the “[Fundamentals of Erosion Prevention and Sediment Control Level I](#)” course,
- b) a licensed professional engineer or landscape architect,
- c) a Certified Professional in Erosion and Sediment Control (CPESC), or
- d) a person who has successfully completed the “Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites” course.

A copy of the certification, or training record for inspector certification, should be kept on site.

3.5.8.2. Schedule of inspections

- a) Inspections described in paragraphs b, c and d below, shall be performed at least twice every calendar week. Inspections shall be performed at least 72 hours apart. Where sites or portions of construction sites have been temporarily stabilized, inspections only have to be conducted once per month until construction activity resumes. Inspection requirements do not apply to definable areas that have been finally stabilized, as described in Subpart 3.1 above. Written notification of the intent to change the inspection frequency and the justification for such request must be submitted to the local Environmental Field Office, or the division's Nashville Central Office for projects of the Tennessee Department of Transportation (TDOT) and the Tennessee Valley Authority (TVA). Should the division discover that monthly inspections of the site are not appropriate due to insufficient stabilization measures or otherwise, twice weekly inspections shall resume. The division may inspect the site to confirm or deny the notification to conduct monthly inspections.
- b) Qualified personnel, as defined in Subsection 3.5.8.1 above (provided by the permittee or cooperatively by multiple permittees), shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site and each outfall.
- c) Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site's drainage system. EPSC measures shall be observed to ensure that they are operating correctly.
- d) Outfall points shall be inspected to determine whether EPSC measures are effectively preventing impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.
- e) Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced, modified or repaired as necessary, before the next rain event; but in no case more than seven days after the need is identified.
- f) Based on the results of the inspection, the site description identified in the [SWPPP](#) in accordance with Section 3.5.1 above and pollution prevention measures identified in the [SWPPP](#) in accordance with Section 3.5.2 above shall be revised as appropriate, but in no case later than seven days following the inspection. Such modifications shall provide for timely implementation of any changes to the [SWPPP](#), but in no case later than 14 days following the inspection.
- g) All inspections shall be documented on the Construction Stormwater Inspection Certification form provided in Appendix C of this permit for all construction sites. An alternative inspection form may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the division's form and the permittee has obtained a written approval from the division to use the alternative form. The form must contain the printed name and signature of the inspector and the certification must be executed by a person who meets the signatory requirements of Section 7.7.2 below. Inspection documentation will be maintained on-site and made available to the division upon request. Inspection reports must be submitted to the division within 10 days of the request. If the division requests the Construction Stormwater Inspection Certification form to be submitted, a copy of the signed original must be submitted.

- h) Trained certified inspectors shall complete inspection documentation to the best of their ability. Falsifying inspection records, or other documentation; or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.
- i) Subsequent primary permittees who have obtained coverage under this permit should conduct twice weekly inspections, unless their portions of the site have been temporarily stabilized, runoff is unlikely due to winter conditions or due to extreme drought as stated in paragraph a) above. The primary permittee (such as a developer) is no longer required to inspect portions of the site that are covered by a subsequent primary permittee (such as a home builder).

3.5.9. Pollution prevention measures for non-stormwater discharges

The SWPPP must identify the source of any non-stormwater discharge listed in Section 1.2.3 above if it is to be combined with stormwater discharges associated with construction activity. The SWPPP shall identify and ensure the implementation of appropriate pollution prevention measures for the non-stormwater components of the discharge. Any non-stormwater must be discharged through stable discharge structures. Estimated volume of the non-stormwater components of the discharge must be included in the design of all impacted control measures.

3.5.10. Documentation of permit eligibility related to Total Maximum Daily Loads (TMDL)

The SWPPP must include documentation supporting a determination of permit eligibility with regard to waters that have an approved TMDL for a pollutant of concern, including:

- a) whether the discharge is identified, either specifically or generally, in an approved TMDL and any associated wasteload allocations, site-specific requirements and assumptions identified for the construction stormwater discharge;
- b) summaries of consultations with the division on consistency of SWPPP conditions with the approved TMDL, and
- c) measures taken to ensure that the discharge of TMDL identified pollutants from the site is consistent with the assumptions and requirements of the approved TMDL, including any specific wasteload allocation that has been established that would apply to the construction stormwater discharge.

4. CONSTRUCTION AND DEVELOPMENT EFFLUENT GUIDELINES

4.1. Non-Numeric Effluent Limitations

Any point source authorized by this general permit must achieve, at a minimum, the effluent limitations representing the degree of effluent reduction attainable by application of best practicable control technology (BPT) currently available and is described in Sections 4.1.1 through 4.1.7 below.

4.1.1. Erosion prevention and sediment controls

Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:

- 1.) Control stormwater volume and velocity to minimize soil erosion in order to minimize pollutant discharges;
- 2.) Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points;
- 3.) Minimize the amount of soil exposed during construction activity;
- 4.) Minimize the disturbance of steep slopes;
- 5.) Minimize sediment discharges from the site. The design, installation and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site;
- 6.) Provide and maintain natural buffers as described in Section 4.1.2 below, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible;
- 7.) Minimize soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted; and
- 8.) Unless infeasible, preserve topsoil. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed.

4.1.2. Water quality riparian buffer zone requirements

Water quality riparian buffer zone requirements in this section apply to all streams adjacent to construction sites except for streams with unavailable parameters or Exceptional Tennessee Waters (see Section 5.4.2 below). A 30-foot natural water quality riparian buffer adjacent to all streams at a construction site shall be preserved, to the maximum extent practicable, during construction activities. The water quality riparian buffer is required to protect waters of the state that are not wet weather conveyances (e.g., perennial and intermittent streams, rivers, lakes, wetlands) located within or immediately adjacent to the boundaries of the project, as identified using Tennessee's standard operating procedures for hydrologic determinations set forth in Rule 0400-40-03-.05(9).⁴ Because of heavy sediment load associated with construction site runoff, water quality riparian buffers are not primary sediment control measures and should not be relied on as such. However, the primary purpose of water quality riparian buffers is additional pollutant removal. Stormwater discharges must enter the water quality riparian buffer zone as sheet flow, not as concentrated flow, where site conditions allow. Rehabilitation and enhancement of a natural buffer zone is allowed, if necessary, to improve its effectiveness in protecting waters of the state.

The water quality riparian buffer zone should be preserved between the top of stream bank and the disturbed construction area. The 30-foot criterion for the width of the buffer zone can be established on an average width basis at a project, as long as the minimum width of the buffer zone is more than 15 feet at any measured location. If the construction site encompasses both sides of a stream, buffer averaging can be applied to both sides, but must be applied independently.

⁴ If obtaining permit coverage for the first time following the effective date of this permit, 15-foot buffers are also required for any wet weather conveyance identified as waters of the United States by the U.S. Army Corps of Engineers or the Environmental Protection Agency.

Every attempt should be made for construction activities to not take place within the water quality riparian [buffer zone and for existing forested areas to be preserved](#). Where it is not practicable to maintain a full water quality riparian buffer, [BMPs](#) providing equivalent protection to a receiving stream as a natural water quality riparian buffer must be used at a construction site. Equivalent [BMPs](#) shall be designed to be as effective in protecting the receiving stream from the impacts of stormwater runoff as a natural water quality riparian buffer. A justification for use and a design of equivalent [BMPs](#) shall be included in the [SWPPP](#). Such equivalent [BMPs](#) are expected to be routinely used at construction projects typically located adjacent to surface waters. These projects may include sewer line construction, roadway construction, utility line or equipment installation, greenway construction, construction of a permanent outfall or a velocity dissipating structure.

This requirement does not apply to any valid [Aquatic Resources Alteration Permit](#) (ARAP), or equivalent permits issued by federal authorities. Additional [buffer zone](#) requirements may be established by the local [MS4](#) program.

4.1.2.1. Water quality riparian buffer zone exemption based on existing uses

Water quality riparian buffer zones as described in Section 4.1.2 above shall not be required in portions of the buffer where certain land uses exist and are to remain in place according to the following:

- a) A use shall be considered existing if it was present within the [buffer zone](#) as of the date of the Notice of Intent for coverage under the CGP. Existing uses may include buildings, parking lots, roadways, utility lines and on-site sanitary sewage systems. Only the portion of the [buffer zone](#) that contains the footprint of the existing land use is exempt from [buffer zones](#). Activities necessary to maintain uses are allowed provided that no additional vegetation is removed from the [buffer zone](#).
- b) If an area with an existing land use is proposed to be converted to another use or the impervious surfaces located within the buffer area are being removed [buffer zone](#) requirements shall apply.

4.1.2.2. Pre-approved sites

Construction activity at sites that were pre-approved prior to February 1, 2010, is exempt from the buffer requirements of Section 4.1.2 above. Evidence of pre-approval for highway projects shall be a final right-of-way plan; and, for other construction projects, the final design drawings with attached written and dated approval by the local, state or federal agency with authority to approve such design drawings for construction.

4.1.3. Soil stabilization

Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have temporarily or permanently ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures such as, properly anchored mulch, soil binders or matting must be employed.

4.1.4. Dewatering

Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls. Appropriate controls may include weir tanks, dewatering tanks, gravity bag filters, sand media particulate filters, pressurized bag filters, cartridge filters or other control units providing the level of treatment necessary to comply with permit requirements.

4.1.5. Pollution prevention measures

The permittee must design, install, implement and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:

- a) minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge;
- b) minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and to stormwater; and
- c) minimize the discharge of pollutants from spills and leaks, and implement chemical spill and leak prevention and response procedures.

Soil analysis shall be performed prior to the application of fertilizer to any portion of the site. Soil analysis shall include parameters included in the Basic Test by the UT Agriculture Extension for developing and maintaining fertilizer programs (e.g., soil pH, buffer value, phosphorus, potassium, calcium, magnesium). Soil samples should be representative of the area for which fertilizer will be applied. Sample type should be composite and should be collected in accordance with the guidance provided in the University of Tennessee Extension “Soil Testing” brochure PB1061, available at: <http://utextension.tennessee.edu/publications/Documents/PB1061.pdf>. Soil analysis results shall be used to determine correct fertilizer application rates to prevent the over-application of fertilizer to the site. Documentation of required soil analysis be maintained onsite with the SWPPP.

4.1.6. Prohibited discharges

The following discharges are prohibited:

- a) Wastewater from washout of concrete, unless managed by an appropriate control.
- b) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials.
- c) Fuels, oils or other potential pollutants used in vehicle and equipment operation and maintenance.
- d) Soaps or solvents used in vehicle and equipment washing.

4.1.7. Surface outlets

Discharges from basins and impoundments shall utilize outlet structures that only withdraw water from near the surface of the basin or impoundment, unless infeasible.

5. SPECIAL CONDITIONS, MANAGEMENT PRACTICES, AND OTHER NON-NUMERIC LIMITATIONS

5.1. Releases in Excess of Reportable Quantities

The discharge of hazardous substances or oil in the stormwater discharges from a facility shall be prevented or minimized in accordance with the applicable stormwater pollution prevention plan for the facility. This permit does not relieve the permittee of the reporting requirements of [40 CFR 117](#) and [40 CFR 302](#). Where a release containing a hazardous substance in an amount equal to or in excess of a reportable quantity established under either [40 CFR 117](#) or [40 CFR 302](#) occurs during a 24 hour period:

- a) the permittee is required to notify the National Response Center (NRC) (800-424-8802), the Tennessee Emergency Management Agency (emergencies: 800-262-3300; non-emergencies: 800-262-3400) and the local emergency planning office (where applicable) in accordance with the requirements of [40 CFR 117](#) or [40 CFR 302](#) as soon as he or she has knowledge of the discharge;
- b) in addition to any follow up notifications required by federal law, the permittee shall submit, within 14 days of knowledge of the release, a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, what actions were taken to mitigate effects of the release, and steps to be taken to minimize the chance of future occurrences, to the appropriate Environmental Field Office (see Subpart 2.8 above); and
- c) the [SWPPP](#) required under Part 3 above of this permit must be updated within 14 days of knowledge of the release: to provide a description of the release, the circumstances leading to the release, and the date of the release. This can be accomplished by including a copy of a written description of the release as described in the paragraph b) above. In addition, the [SWPPP](#) must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

5.2. Spills

This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

5.3. Discharge Compliance with State Water Quality Standards

5.3.1. Violation of water quality standards

This permit does not authorize stormwater or other discharges that would cause or contribute to a violation of a state water quality standard (Tennessee Rules, Chapters [0400-40-03](#), [0400-40-04](#)). Such discharges constitute a violation of this permit.

Where a discharge is already authorized under this permit and the division determines the discharge to cause or contribute to the violation of applicable state water quality standards, the division will notify the [operator](#) of such violations. The permittee shall take all necessary actions to ensure future discharges do not cause or contribute to the violation of a water quality standard and shall document these actions in the [SWPPP](#).

5.3.2. Discharge quality

- a) The construction activity shall be carried out in such a manner that will prevent violations of water quality criteria as stated in the Tennessee Rules, Chapter 0400-40-03-.03. This includes, but is not limited to, the prevention of any discharge that causes a condition in which visible solids, bottom deposits or turbidity impair the usefulness of waters of the state for any of the uses designated for that water body by Tennessee Rules, Chapter 0400-40-04. Construction activity carried out in the manner required by this permit shall be considered in compliance with the Tennessee Rules, Chapter 0400-40-03-.03.
- b) There shall be no distinctly visible floating scum, oil or other matter contained in the stormwater discharge.
- c) The stormwater discharge must not cause an objectionable color contrast in the receiving stream.
- d) The stormwater discharge must result in no materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life or fish and aquatic life in the receiving stream. This provision includes species covered under Subpart 1.3 above.

5.4. Discharges into Waters with Unavailable Parameters or Exceptional Tennessee Waters

5.4.1. SWPPP/BMP requirements

Discharges that would cause [measurable degradation](#) of waters with unavailable parameters or that would cause more than de minimis degradation of Exceptional Tennessee Waters are not authorized by this permit (see Subpart 1.3 above). To be eligible to obtain and maintain coverage under this permit, the [operator](#) must satisfy, at a minimum, the following additional requirements for discharges into waters with unavailable parameters for siltation and habitat alterations due to in-channel erosion (or discharges upstream of such waters and because of the proximity to the segment with unavailable parameters and the nature of the discharge is likely to contribute sediment in amounts measurable in the waters with unavailable parameters) and for discharges to Exceptional Tennessee Waters (or discharges upstream of such waters and because of the proximity to the exceptional segment and the nature of the discharge is likely to cause more than de minimis degradation in the exceptional segment):

- a) The [SWPPP](#) must certify that EPSC measures used at the site are designed to control stormwater runoff generated by a [5-year, 24-hour storm](#) event (the design storm - see Part 10 below: “2-year and 5-year design storm depths and intensities”), at a minimum, either from total rainfall in the designated period or the equivalent intensity as specified on the following website http://hdsc.nws.noaa.gov/hdsc/pfds/orb/tn_pfds.html. Additional physical or chemical treatment of stormwater runoff, such as use of treatment chemicals, may be necessary to minimize the amount of sediment being discharged when clay and other fine particle soils are found on sites.
- b) The [SWPPP](#) must be prepared by individuals with one or more of the following qualifications:

- A licensed professional engineer or landscape architect.
 - A Certified Professional in Erosion and Sediment Control (CPESC).
 - A person who has successfully completed the “Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites” course.
- c) A copy of the certification or training record for inspector certification should be included with the field SWPPP.
- d) The permittee shall perform inspections described in Section 3.5.8 above at least twice every calendar week. Inspections shall be performed at least 72 hours apart.
- e) The permittee must certify on the form provided in Appendix C of this permit whether or not all planned and designed EPSC measures are installed and in working order. The form must contain the printed name and signature of the inspector and the certification must be executed by a person who meets the signatory requirements of Section 7.7.2 below. The record of inspections must be kept at the construction site with a copy of the [SWPPP](#). For record retention requirements, see Part 6 below.
- f) If the division finds that an operator is contributing to the impairment of a receiving stream despite complying with the [SWPPP](#), The operator will be notified by the director in writing that the discharge is no longer eligible for coverage under the general permit. The operator may update the [SWPPP](#) and implement the necessary changes designed to eliminate further impairment of the receiving stream. If the permittee does not implement the [SWPPP](#) changes within seven days of receipt of notification, the permittee will be notified in writing that continued discharges must be covered by an individual permit (see Subpart 7.12 below). To obtain the individual permit, the [operator](#) must file an individual permit application (U.S. EPA NPDES Forms [1](#) and [2F](#)). The project must be stabilized immediately and remain stable until the [SWPPP](#) is updated and the individual permit is issued. Only discharges from earth disturbing activities necessary for stabilization are authorized to continue until the individual permit is issued.
- g) For an on-site outfall in a drainage area totaling five or more acres, a minimum sediment basin volume that will provide treatment for a calculated volume of runoff from a [5 year, 24 hour storm](#) and runoff from each acre drained; or equivalent control measures as specified in the [Tennessee Erosion and Sediment Control Handbook](#), shall be provided until final stabilization of the site. The drainage area includes both disturbed and undisturbed portions of the site and areas adjacent to the site, all draining through a common outfall. Where an equivalent control measure is substituted for a sediment retention basin, the equivalency must be justified in the SWPPP narrative. Runoff from any undisturbed acreage should be diverted around the [disturbed area](#) and the sediment basin. Diverted runoff can be omitted from the volume calculation. Sediment storage expected from the [disturbed areas](#) must be included and a marker installed signifying when sediment accumulation has reduced the wet storage volume by 50%. In a case that sediment marker is damaged by the volume of water or sediment, a best professional judgement should be used in evaluating sediment basin capacity.
- h) For an on-site outfall in a drainage area totaling 3.5 - 4.9 acres, a minimum sediment trap volume that will provide treatment for a calculated volume of runoff from a 5-year, 24-hour storm and runoff from each acre drained, is recommended until final stabilization of the site. A drainage area of 3.5 - 4.9 acres includes both disturbed and undisturbed portions of the site or areas adjacent to the site, all draining through the common outfall. Runoff from any undisturbed acreage should be diverted around the disturbed area and the sediment trap. Diverted runoff can be omitted from the volume calculation. Sediment

storage expected from the disturbed areas must be included and a marker installed signifying when sediment accumulation has reduced the wet storage volume by 50%.

- i) The director may require revisions to the [SWPPP](#) necessary to prevent a negative impact to legally protected state or federally listed aquatic fauna, their habitat or the receiving waters.

5.4.2. Water quality riparian buffer zone requirements

Sites that contain, or are adjacent to, receiving waters with unavailable parameters or Exceptional Tennessee Waters shall preserve a 60-foot natural water quality riparian [buffer zone](#) adjacent to the receiving stream. The buffer zone shall be preserved to the maximum extent practicable during construction activities at the site. The water quality riparian [buffer](#) is required to protect [waters of the state](#), as identified using Tennessee's standard operating procedures for hydrologic determinations set forth in Rule [0400-40-03-.05\(9\)](#), located within, or immediately adjacent to, the boundaries of the project.⁵ Because of heavy sediment load associated with construction site runoff, water quality riparian buffers are not primary sediment control measures and should not be relied on as such. The primary purpose of water quality riparian buffers is additional pollutant removal. Stormwater discharges must enter the water quality riparian buffer as sheet flow, not as concentrated flow, where site conditions allow. Rehabilitation and enhancement of a natural water quality riparian [buffer zone](#) is allowed, if necessary, to improve its effectiveness in protecting [waters of the state](#).

The natural water quality riparian [buffer zone](#) should be preserved between the top of stream bank and the disturbed construction area. The 60-foot criterion for the width of the [buffer](#) can be established on an average width basis at a project, as long as the minimum width of the [buffer](#) is more than 30 feet at any measured location. If the construction site encompasses both sides of a stream, buffer averaging can be applied to both sides, but must be applied independently.

Every attempt should be made for construction activities not to take place within the water quality riparian [buffer zone](#) and for existing forested areas to be preserved. Where it is not practicable to maintain a full water quality riparian buffer, or if the construction site is located in an MS4 jurisdiction and would qualify for a smaller permanent water quality riparian buffer due to the size of the drainage area, then [BMPs](#) providing equivalent protection to a receiving stream as a natural riparian zone may be used at a construction site. Equivalent [BMPs](#) shall be designed to be as effective in protecting the receiving stream from the impacts of stormwater runoff as a natural water quality riparian [buffer zone](#). A justification for use and a design of equivalent [BMPs](#) shall be included in the [SWPPP](#). Such equivalent [BMPs](#) are expected to be routinely used at construction projects typically located adjacent to surface waters. These projects may include: sewer line construction, roadway construction, utility line or equipment installation, greenway construction, construction of a permanent outfall or a velocity dissipating structure.

This requirement does not apply to an area that is being altered under the authorization of a valid [Aquatic Resources Alteration Permit](#) (ARAP), or equivalent permits issued by federal authorities. Additional natural [buffer zone](#) requirements may be established by the local [MS4](#) program.

⁵ If obtaining permit coverage for the first time following the effective date of this permit, 15-foot buffers are also required for any wet weather conveyance identified as waters of the United States by the U.S. Army Corps of Engineers or the Environmental Protection Agency.

5.4.2.1. Water quality riparian buffer zone exemption based on existing uses

Water quality riparian buffer zones as described in Section 5.4.2 above shall not be required in portions of the buffer where certain land uses exist and are to remain in place according to the following:

- a) A use shall be considered existing if it was present within the buffer zone as of the date of the Notice of Intent for coverage under the CGP. Existing uses may include buildings, parking lots, roadways, utility lines and on-site sanitary sewage systems. Only the portion of the buffer zone that contains the footprint of the existing land use is exempt from buffer zones. Activities necessary to maintain uses are allowed provided that no additional vegetation is removed from the buffer zone.
- b) If an area with an existing land use is proposed to be converted to another use or the impervious surfaces located within the buffer area are being removed buffer zone requirements shall apply.

5.4.3. Pre-approved sites

Construction activity at sites that have been pre-approved before February 1, 2010, are exempt from the buffer requirements of Section 5.4.2 above. Evidence of pre-approval for highway projects shall be a final right-of-way plan and for other construction projects, the final design drawings with attached dated, written approval by the local, state or federal agency with authority to approve such design drawings for construction.

6. RETENTION, ACCESSIBILITY AND SUBMISSION OF RECORDS

6.1. Documents

The permittee shall retain copies of SWPPPs, reports required by this permit, records of all data used to complete the NOI and the NOT for a period of at least three years from the date the NOT is submitted. This period may be extended by written request of the director.

6.2. Accessibility and Retention of Records

The permittee shall retain a copy of the SWPPP and a copy of the permit at the construction site (or other local location accessible to the director and the public) from the date construction commences to the date of termination of permit coverage. Permittees with day-to-day operational control over SWPPP implementation shall have a copy of the SWPPP available at a central location onsite for the use of all operators and those identified as having responsibilities under the plan whenever they are on the construction site. The permittee shall maintain a copy of all records for a period of three years once coverage is terminated.

6.2.1. Posting information at the construction site

The initial site-wide permittee shall post a notice near the main entrance of the construction site accessible to the public with the following information:

- a) A copy of the NOC with the NPDES permit tracking number for the construction project.

- b) A name or company name; E-mail address (if available); telephone number and address of the project site owner/operator or a local contact person.
- c) A brief description of the project.
- d) The location of the [SWPPP](#) (see Section 3.3.3 above).

The notice must be maintained in a legible condition. The notice shall be posted in a local public building if posting this information near a main entrance is infeasible due to safety concerns or not accessible to the public. If the construction project is a [linear construction project](#) (e.g., pipeline or highway), the notice must be placed in a publicly accessible location near where construction is actively underway and moved as necessary. This permit does not provide the public with any right to trespass on a construction site for any reason, including inspection of a site. This permit does not require permittees to allow members of the public access to a construction site.

The permittee shall also retain following items in an appropriate location on-site:

- a) A rain gauge (or use a reference site for a record of daily precipitation),
- b) A copy of the twice weekly inspection reports,
- c) A documentation of quality assurance site assessments, if applicable (see Section 3.1.2 above).
- d) A copy of the site inspector's certification (e.g., [Fundamentals of Erosion Prevention and Sediment Control Level 1](#) or Level 2, P.E., P.L.A., CPESC).

6.3. Electronic Submission of Documents

If the division notifies dischargers by mail, E-mail, public notice or by making information available on the world wide web of electronic forms or other report options that become available at a later date (e.g., electronic submission of forms), the [operators](#) may take advantage of those options to satisfy the NOI, NOT and other report notification requirements.

7. STANDARD PERMIT CONDITIONS

7.1. Duty to Comply

7.1.1. Duty to comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Tennessee Water Quality Control Act (TWQCA) and is grounds for an enforcement action, permit termination, revocation and reissuance, modification; or for denial of a permit renewal application.

7.1.2. Penalties

Pursuant to [T.C.A. § 69-3-115](#) of The Tennessee Water Quality Control Act of 1977, as amended:

- a) Any person who violates an effluent standard or limitation or a water quality standard established under this part ([T.C.A. § 69-3-101](#), et. seq.); violates the terms or conditions of this permit; fails to complete a filing requirement; fails to allow or perform an entry, inspection, monitoring or reporting requirement; violates a final determination or order of the board, panel or commissioner; or violates any other provision of this part or any rule

or regulation promulgated by the board, is subject to a civil penalty of up to ten thousand dollars (\$10,000) per day for each day during which the act or omission continues or occurs.

- b) Any person unlawfully polluting the [waters of the state](#) or violating or failing, neglecting, or refusing to comply with any of the provisions of this part ([T.C.A. § 69-3-101](#), et. seq.) commits a Class C misdemeanor. Each day upon which such violation occurs constitutes a separate offense.
- c) Any person who willfully and knowingly falsifies any records, information, plans, specifications, or other data required by the board or the commissioner, or who willfully and knowingly pollutes the [waters of the state](#), or willfully fails, neglects or refuses to comply with any of the provisions of this part ([T.C.A. § 69-3-101](#), et. seq.) commits a Class E felony and shall be punished by a fine of not more than twenty-five thousand dollars (\$25,000) or incarceration, or both.

7.1.3. Civil and criminal liability

Nothing in this permit shall be construed to relieve the discharger from civil or criminal penalties for noncompliance. Notwithstanding this permit, the discharger shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge to any surface or subsurface waters. Additionally, notwithstanding this permit, it shall be the responsibility of the discharger to conduct stormwater discharge activities in a manner such that public or private nuisances or health hazards will not be created. Furthermore, nothing in this permit shall be construed to preclude the State of Tennessee from any legal action or relieve the discharger from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or the Federal Water Pollution Control Act.

7.1.4. Liability under state law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable local, state or federal law.

7.2. **Continuation of the Expired General Permit**

Permittees shall maintain coverage under this general permit until a new general permit is issued. Permittees who choose not to maintain coverage under the expired general permit, or are required to obtain an individual permit, must submit an application (U.S. EPA NPDES Forms [1](#) and [2F](#) and any other [applicable forms](#)) at least 180 days prior to expiration of this general permit. Permittees who are eligible and choose to be covered by the new general permit must submit an NOI by the date specified in that permit. Facilities that have not obtained coverage under this permit by the permit expiration date cannot become authorized to discharge under the continued permit.

[Operator\(s\)](#) of an existing site permitted under the division's 2011 construction general permit shall maintain full compliance with the existing [SWPPP](#). The existing [SWPPP](#) should be modified, if necessary, to meet requirements of this new general permit, and the [SWPPP](#) changes implemented no later than 12 months following the new permit effective date. The permittee shall make the updated [SWPPP](#) available for the division's review upon request.

7.3. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

7.4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment.

7.5. Duty to Provide Information

The permittee shall furnish to the division or an authorized representative of the division, within a time specified by the division, any information that the division may request to determine compliance with this permit or other information relevant to the protection of the [waters of the state](#). The permittee shall also furnish to the division, upon request, copies of records required to be kept by this permit.

7.6. Other Information

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the Notice of Intent or in any other report to the director, he or she shall promptly submit such facts or information.

7.7. Signatory Requirements

All NOIs, [SWPPPs](#), NOTs, Construction Stormwater Inspection Certifications, Construction Stormwater Monitoring Report forms, reports, certifications or information either submitted to the director or the [operator](#) of a large or medium municipal separate storm sewer system shall be signed as described in Sections 7.7.1 and 7.7.2 below and dated.

7.7.1. Signatory requirements for an NOI⁶

The NOI shall be signed as follows:

- a) For a corporation, by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - i. a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or
 - ii. the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated site including having the explicit or implicit duty of

⁶ As specified in 40 CFR 122.22(a)(1)-(3) [48 FR 14153, Apr. 1, 1983, as amended at 48 FR 39619, Sept. 1, 1983; 49 FR 38047, Sept. 29, 1984; 50 FR 6941, Feb. 19, 1985; 55 FR 48063, Nov. 16, 1990; 65 FR 30907, May 15, 2000]

making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

- b) For a general partnership, by each general partner in the general partnership,
- c) For a sole proprietorship, by the proprietor,
- d) For a municipality, state, federal, or other public agency, by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
 - i. the chief executive officer of the agency, or
 - ii. a senior executive officer having responsibility for the overall operations of a principle geographic unit of the agency (e.g., Regional Administrators of EPA).

NOTE: The division does not require specific assignments or delegations of authority to responsible corporate or municipal, state, federal, or other public agency officers. The division will presume that these officers have the requisite authority to sign permit applications unless the entity has notified the director to the contrary. Procedures governing authority to sign permit applications may provide for assignment or delegation to applicable positions rather than to specific individuals.

7.7.2. Signatory requirements for reports and other items

SWPPPs, Construction Stormwater Inspection Certification forms, reports, certifications or other information submittals required by the permit and other information requested by the division, including but not limited to Notice of Violation responses, shall be signed by a person described in Section 7.7.1 above, or by a duly authorized representative of that person.

7.7.3. Duly authorized representative

For a purpose of satisfying signatory requirements for reports (see Section 7.7.2 above), a person is a duly authorized representative only if:

- a) the authorization is made in writing by a person described in Section 7.7.1 above;
- b) the authorization specifies either an individual or a position having responsibility for the overall operation of the regulated site or activity such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; a duly authorized representative may thus be either a named individual or any individual occupying a named position; and
- c) the written authorization is submitted to the director or an appropriate EFO (see Section 2.8 above). The written authorization shall be a written document including the name of the newly authorized person and the contact information (title, mailing address, phone number, fax number and E-mail address) for the authorized person. The written

authorization shall be signed by the newly authorized person accepting responsibility and by the person described in Section 7.7.1 above delegating the authority.

7.7.4. Changes to authorization

If an authorization under Sections 7.7.1 above or 7.7.3 above is no longer accurate because a different individual or position has responsibility as the primary or secondary permittee, but the company name (permittee name) remains the same, a new NOI and **SWPPP** certification shall be submitted to an appropriate EFO (see Section 2.8 above) and signed by the new party who meets signatory authority satisfying the requirements of Sections 7.7.1 above or 7.7.3 above. The NOI shall include the new individual's information (title, mailing address, phone number, fax number and E-mail address), the existing tracking number and the project name.

7.7.5. Signatory requirements for primary permittees

Primary permittees required to sign an NOI and **SWPPP** because they meet the definition of an **operator** (see Subpart 2.2 above) shall sign the following certification statement on the NOI and on the **SWPPP**:

"I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury."

7.7.6. Signatory requirements for secondary permittees

Secondary permittees required to sign an NOI and **SWPPP** because they meet the definition of an **operator** but who are not primarily responsible for preparing an NOI and **SWPPP**, shall sign the following certification statement on the NOI and on the **SWPPP**:

"I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury."

7.8. Penalties for Falsification of Reports

Knowingly making any false statement on any report or form required by this permit may result in the imposition of criminal penalties as provided for in [Section 309 of the Clean Water Act](#) and in [T.C.A. § 69-3-115](#) of the Tennessee Water Quality Control Act.

7.9. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to [Section 311 of the Clean Water Act](#) or [Section 106 of the Comprehensive Environmental Response, Compensation and Liability Act](#) of 1980 (CERCLA).

7.10. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges; nor does it authorize any injury to private property, any invasion of personal rights or any infringement of federal, state or local laws or regulations. The issuance of this permit does not authorize trespassing or discharges of stormwater or non-stormwater across private property.

7.11. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

7.12. Individual Permits

7.12.1. Required coverage

The director may require any person covered by this permit to apply for and obtain an individual NPDES permit to ensure adequate protection of designated uses of a receiving stream. Any interested person may petition the director in writing to take action under this paragraph, but must include in their petition the justification for such an action. Where the director requires a discharger authorized to discharge under this permit to apply for an individual NPDES permit, the director shall notify the discharger in writing that an individual permit application is required. This notification will include a brief statement of the reasons for this decision, an application form, a statement setting a deadline for the discharger to file the application and a statement that coverage under this general permit shall terminate upon the effective date of an individual NPDES permit; or denial of coverage under an individual permit. The notification may require stabilization of the site and suspend coverage under this general permit until the individual permit is issued. Individual permit applications shall be submitted to the appropriate Environmental Field Office of the division as indicated in Subpart 2.8 above. The director may grant additional time to submit the application upon request of the applicant. If a discharger fails to submit in a timely manner an individual NPDES permit application as required by the director under this paragraph, then the applicability of this permit to the discharger will be terminated at the end of the day specified by the director for application submittal.

If the decision to require an individual NPDES permit precedes the issuance of coverage under this general permit, earth disturbing activities cannot begin until the individual permit is issued.

7.12.2. Permittee requested coverage

Any discharger authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit. Any discharger that knowingly cannot abide by the terms and conditions of this permit must apply for an individual permit. In such cases, the permittee shall submit an individual application in accordance with the requirements of [40 CFR 122.26\(c\)\(1\)\(ii\)](#), with reasons supporting the request, to the appropriate division's Environmental Field Office. The request may be granted by issuance of an individual permit, or alternative general permit, if the reasons cited by the permittee are adequate to support the request.

7.12.3. General permit termination

When an individual NPDES permit is issued to a discharger otherwise subject to this permit, or the discharger is authorized to discharge under an alternative NPDES general permit, the applicability of this permit to the discharger is terminated on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit, whichever the case may be. When an individual NPDES permit is denied to an owner or **operator** otherwise subject to this permit, or the owner or **operator** is denied for coverage under an alternative NPDES general permit, the applicability of this permit to the individual NPDES permittee is terminated on the date of such denial, unless otherwise specified by the director. Coverage under the [Tennessee Multi-Sector General Permit for the Discharge of Stormwater from an Industrial Activity](#) (TMSP) will not be considered as an alternative general permit under this section without being specified by the director.

7.13. Other, Non-Stormwater, Program Requirements

No condition of this permit shall release the permittee from any responsibility or requirements under other environmental statutes or regulations.

7.14. Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related equipment) which are installed or used by the permittee to achieve compliance with the conditions of this permit and with the requirements of stormwater pollution prevention plans.

Proper operation and maintenance also includes adequate laboratory quality assurance and quality control procedures. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by a permittee, when determined by the permittee or the division to be necessary to achieve compliance with the conditions of the permit.

7.15. Inspection and Entry

The permittee shall allow authorized representatives of the Environmental Protection Agency, the director or an authorized representative of the commissioner of TDEC, or, in the case of a construction site which discharges through a municipal separate storm sewer, an authorized representative of the [MS4](#) receiving the discharge, upon the presentation of credentials and other documents as may be required by law:

- a) to enter upon the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- b) to have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and
- c) to inspect any facilities or equipment, including monitoring and control equipment.

7.16. Permit Actions

This permit may be issued, modified, revoked, reissued or terminated for cause in accordance with this permit and the applicable requirements of [T.C.A. § 69-3-108](#). The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

8. REQUIREMENTS FOR TERMINATION OF COVERAGE

8.1. Termination of Developer and Builder Coverage

8.1.1. Termination process for primary permittees

Primary permittees wishing to terminate coverage under this permit must submit a completed NOT form provided in Appendix B of this permit. Primary permittees who abandon a site and fail to submit the NOT will be in violation of this permit. If the NOT was not submitted five years following the “estimated end date” (as identified on the NOI), the division can terminate the CGP coverage. Signs notifying the public of the construction activity shall be in place until the NOT form has been submitted. Primary permittees may terminate permit coverage only if the conditions described below occur at the site:

- a) All earth-disturbing activities and, if applicable, construction support activities permitted under Section 1.2.2 at the site are complete and the following requirements are met:
 - i. For any areas that were disturbed during construction, are not covered by permanent structures and over which the permittee had control during the construction activities; the requirements for final vegetation or non-vegetative stabilization described in Subsection 3.5.3.2 are met.
 - ii. The permittee has removed and properly disposed of all construction materials; and, waste and waste handling devices. The permittee has removed all equipment and vehicles that were used during construction, unless they are intended for long-term use following termination of permit coverage.
 - iii. The permittee has removed all stormwater controls that were installed and maintained during construction, except those that are intended for long-term use following termination of permit coverage.
 - iv. The permittee has identified who is responsible for ongoing maintenance of any stormwater controls left on the site for long-term use following termination of permit coverage.
- b) The permittee has transferred control of all areas of the site for which he is responsible (including, but not limited to, infrastructure, common areas, stormwater drainage structures, sediment control basin) under this permit to another operator, and that operator has submitted an NOI and obtained coverage under this permit.
- c) The permittee obtains coverage under an individual or alternative general NPDES permit.

8.1.2. NOT review

The division may review NOTs for completeness and accuracy and, when necessary, investigate the proposed site for which the NOT was submitted. Coverage under the permit is terminated when the permit record is published on TDEC's dataviewer as "inactive."

The division retains the right to deny termination of coverage under this general permit upon receipt of the NOT. If the local Environmental Field Office has information indicating that the permit coverage is not eligible for termination, written notification will be provided that permit coverage has not been terminated. The notification will include a summary of existing deficiencies. When the site meets the termination criteria, the NOT should be re-submitted.

If any permittee files for bankruptcy or the site is foreclosed on by the lender, the permittee should notify the division of the situation so that the division may assess the site to determine if permit coverage should be obtained by any other person or whether other action is needed.

8.2. Termination of Builder and Contractor Coverage

8.2.1. Termination process for secondary permittees

Secondary permittees must request termination of coverage under this permit by submitting an NOT when they are no longer an operator at the construction site. Secondary permittees receive coverage under this permit, but are not normally mailed an NOC. Consequently, the division may, but is not required to, notify secondary permittees that their notice of termination has been received. If the division has reason to believe that the secondary permittee's NOT should not have been submitted, the division will deny the secondary permittee's NOT in writing, with specific reasons as to why the NOT should not have been submitted.

8.3. NOT certification

The NOT and the following certification must be signed in accordance with Subpart 7.7 above (Signatory Requirements) of this permit:

"I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury."

8.4. Where to Submit an NOT

The NOT shall be submitted to the Environmental Field Office (EFO) which issued the NOC to the primary permittee. A list of counties and the corresponding EFOs is provided in Subpart 2.8 above. The appropriate permit tracking number must be clearly printed on the form.

9. Aquatic Resource Alteration Permits (ARAPs)

Alterations to channels or waterbodies (streams, wetlands and/or other [waters of the state](#)) that are contained on, traverse through or are adjacent to the construction site, may require an [Aquatic Resources Alteration Permit](#) (ARAP) (<http://www.tn.gov/environment/article/permit-water-aquatic-resource-alteration-permit>). It is the responsibility of the developer to provide a determination of the water's status.⁷ This determination must be conducted in accordance with Tennessee's standard operating procedures for hydrologic determinations set forth at Rule [0400-40-03.05\(9\)](#). The permittee can make an assumption that streams/wetlands are present at the site in order to expedite the permit process. In some cases, issuance of coverage under the CGP may be delayed or withheld if the appropriate ARAP has not been obtained. At a minimum, any delay in obtaining an ARAP for water body alteration associated with the proposed project must be adequately addressed in the [SWPPP](#) prior to issuance of an NOC. Failure to obtain an ARAP prior to any actual alteration may result in enforcement action for the unauthorized alteration.

10. DEFINITIONS

"2-year and 5-year design storm depths and intensities" The estimated design rainfall amounts, for any return period interval (i.e., 2-yr, 5-yr, 25-yr, etc.,) in terms of either 24-hour depths or intensities for any duration, can be found by accessing the following NOAA National Weather Service Atlas 14 data for Tennessee: http://hdsc.nws.noaa.gov/hdsc/pfds/orb/tn_pfds.html. Other data sources may be acceptable with prior written approval by TDEC Division of Water Resources.

"Best Management Practices" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the discharge of pollutants to [waters of the state](#). BMPs also include treatment requirements, operating procedures; and practices to control plant site runoff, spillage, leaks, sludge or waste disposal, or drainage from raw material storage.

"Borrow Pit" is an excavation from which erodible material (typically soil) is removed to be fill for another site. There is no processing or separation of erodible material conducted at the site. Given the nature of activity and pollutants present at such excavation, a borrow pit is considered a construction activity for the purpose of this permit.

"Buffer Zone" or "Water Quality Riparian Buffer" is a strip of dense undisturbed perennial native vegetation, either original or re-established, that borders streams and rivers, ponds and lakes, wetlands and seeps. Buffer zones are established for the purposes of slowing water runoff, enhancing water infiltration and minimizing the risk of any potential sediments, nutrients or other pollutants from leaving the upland area and reaching surface waters. Buffer zones are most effective when stormwater runoff is flowing into and through the buffer zone as shallow sheet

⁷ The EPA considers inventorying a site's natural features is a technique called fingerprinting. More info can be found in EPA's document - EPA's Developing Your SWPPP – A Guide for Construction Sites (EPA-833-R-06-004 May 2007).

flow, rather than in concentrated form such as in channels, gullies, or [wet weather conveyances](#). Therefore, it is critical that the design of any development include management practices, to the maximum extent practical, that will result in stormwater runoff flowing into and through the buffer zone as shallow sheet flow. Buffer zones are established for the primary purpose of protecting water quality and maintaining a healthy aquatic ecosystem in receiving waters.

“Clearing” in the definition of discharges associated with construction activity, typically refers to removal of vegetation and disturbance of soil prior to grading or excavation in anticipation of construction activities. Clearing may also refer to wide area land disturbance in anticipation of non-construction activities; for instance, clearing forested land in order to convert forestland to pasture for wildlife management purposes. Clearing, grading and excavation do not refer to clearing of vegetation along existing or new roadways, highways, dams or power lines for sight distance or other maintenance and/or safety concerns, or cold planning, milling, and/or removal of concrete and/or bituminous asphalt roadway pavement surfaces. The clearing of land for agricultural purposes is exempt from federal stormwater NPDES permitting in accordance with Section 401(1)(1) of the 1987 Water Quality Act and state stormwater NPDES permitting in accordance with the Tennessee Water Quality Control Act of 1977 ([T.C.A. 69-3-101](#) et seq.).

“Commencement of construction” The initial disturbance of soils associated with clearing, grading, excavating or other construction activities.

“Common plan of development or sale” is broadly defined as any announcement or documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design) or physical demarcation (including boundary signs, lot stakes, surveyor markings) indicating construction activities may occur on a specific plot. A common plan of development or sale identifies a situation in which multiple areas of disturbance are occurring on contiguous areas. This applies because the activities may take place at different times, on different schedules, by different [operators](#).

“Control measure” As used in this permit, refers to any Best Management Practice (BMP) or other method used to prevent or reduce the discharge of pollutants to [waters of the state](#).

“CWA” means the Clean Water Act of 1977 or the Federal Water Pollution Control Act ([33 U.S.C. 1251](#), et seq.)

“Department” means the Department of Environment and Conservation.

“Director” means the director, or authorized representative, of the Division of Water Resources of the State of Tennessee, Department of Environment and Conservation.

“Discharge of stormwater associated with construction activity” As used in this permit, refers to stormwater point source discharges from areas where soil disturbing activities (e.g., clearing, grading, excavation), or construction materials or equipment storage or maintenance (e.g., earth fill piles, fueling, waste material) are located.

“Disturbed area” means the total area presented as part of the development (and/or of a larger common plan of development) subject to being cleared, graded, or excavated during the life of the development. The area cannot be limited to only the portion of the total area that the site-wide owner/developer initially disturbs through the process of various land clearing activities or in the construction of roadways, sewers and water utilities, stormwater drainage structures, etc., to make the property marketable.

“Division” means the Division of Water Resources of the State of Tennessee, Department of Environment and Conservation.

“Exceptional Tennessee Waters” are surface waters designated by the division as having the characteristics set forth at Tennessee Rules, Chapter [0400-40-03-.06\(4\)](#). Characteristics include waters within parks or refuges; scenic rivers; waters with threatened or endangered species; waters that provide specialized recreational opportunities; waters within areas designated as lands unsuitable for mining; waters with naturally reproducing trout; waters with exceptional biological diversity and other waters with outstanding ecological or recreational value.

“Final Stabilization” means that all soil disturbing activities at the site have been completed and one of the three following criteria is met:

- a) A perennial, preferably native, vegetative cover with a uniform (i.e., evenly distributed, without large bare areas) density of at least 70 percent has been established on all unpaved areas and areas not covered by permanent structures, and all slopes and channels have been permanently stabilized against erosion.
- b) Equivalent permanent stabilization measures such as the use of riprap; permanent geotextiles; hardened surface materials including concrete, asphalt, gabion baskets or Reno mattresses have been employed.
- c) For construction projects on land used for agricultural or silvicultural purposes, final stabilization may be accomplished by returning the disturbed land to its preconstruction agricultural or silvicultural use.

“Improved sinkhole” is a natural surface depression that has been altered in order to direct fluids into the hole opening. Improved sinkhole is a type of injection well regulated under the [Underground Injection Control](#) (UIC) program. Underground injection constitutes an intentional disposal of waste waters in natural depressions, open fractures and crevices, such as those commonly associated with weathering of limestone.

“Inspector” An inspector is a person with following qualifications:

- a) a valid certification from the “[Fundamentals of Erosion Prevention and Sediment Control Level I](#)” course,
- b) a licensed professional engineer or landscape architect,
- c) a Certified Professional in Erosion and Sediment Control (CPESC), or
- d) successfully completed the “Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites” course.

An inspector performs and documents the required inspections, paying particular attention to time-sensitive permit requirements such as stabilization and maintenance activities. An inspector may also have the following responsibilities:

- a) Oversee the requirements of other construction-related permits, such as an [Aquatic Resources Alteration Permit](#) (ARAP) or Corps of Engineers permit for construction activities in or around [waters of the state](#).
- b) Update field SWPPPs.

- c) Conduct pre-construction inspection to verify that undisturbed areas have been properly marked and initial measures have been installed.
- d) Inform the permit holder of activities that may be necessary to gain or remain in compliance with the CGP and other environmental permits.

“Linear Project” is a land disturbing activity as conducted by an underground/overhead utility or highway department, including, but not limited to, any cable line or wire for the transmission of electrical energy; any conveyance pipeline for transportation of gaseous or liquid substance; any cable line or wire for communications; or any other energy resource transmission ROW or utility infrastructure, e.g., roads and highways. Activities include the construction and installation of these utilities within a corridor. Linear project activities also include the construction of access roads, staging areas and borrow/spoil sites associated with the linear project. Land disturbance specific to the development of residential and commercial subdivisions or high-rise structures is not considered a linear project.

“Measurable Degradation,” as used in the context of discharges or withdrawals – Changes in parameters of waters that are of sufficient magnitude to be detectable by the best available instrumentation or laboratory analyses.

(Note: Because analytical techniques change, the Department may consider either the most sensitive detection method needed to comply with state standards or any biological, chemical, physical, or analytical method, conducted in accordance with U.S. EPA approved methods as identified in 40 C.F.R. part 136. Consistent with T.C.A. § 69-3-108, for scenarios involving cumulative, non-measurable activities or parameters that are managed by a narrative criterion, the Department will use mathematical models and ecological indices to ensure no degradation will result from the authorization of such activities, consistent with the state’s mixing zone policy.)

“Monthly” refers to calendar months.

“Municipal Separate Storm Sewer System” or **“MS4”** is defined in [40 CFR §122.26\(b\)\(8\)](#) to mean a conveyance or system of conveyances (e.g., roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) that are:

- a) owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section [208 of the CWA](#) that discharges to waters of the United States;
- b) designed or used for collecting or conveying stormwater;
- c) not a combined sewer; and
- d) not part of a Publicly Owned Treatment Works (POTW) as defined in 40 CFR §122.2.

“NOI” means notice of intent to be covered by this permit (see Part 2 above)

“NOT” means notice of termination (see Part 8 above).

“Operator” for the purpose of this permit and in the context of stormwater associated with construction activity, means any person associated with a construction project that meets either of the following two criteria:

- a) This person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project, and is considered the primary permittee.
- b) This person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a [SWPPP](#) for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

It is anticipated that at different phases of a construction project, different types of parties may satisfy the definition of “operator.”

“Point source” means any discernible, confined and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include introduction of pollutants from non-point source agricultural and silvicultural activities, including stormwater runoff from orchards, cultivated crops, pastures, range lands, forest lands or return flows from irrigated agriculture or agricultural stormwater runoff.

“Qualifying State, Tribal, or local erosion and sediment control program” is one that includes, as defined in [40 CFR 122.44\(s\)](#):

- a) Requirements for construction site operators to implement appropriate erosion and sediment control best management practices.
- b) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality.
- c) Requirements for construction site operators to develop and implement a stormwater pollution prevention plan. A stormwater pollution prevention plan includes site descriptions, descriptions of appropriate control measures, copies of approved State, Tribal or local requirements, maintenance procedures, inspection procedures and identification of non-stormwater discharges.
- d) Requirements to submit a site plan for review that incorporates consideration of potential water quality impacts.

“Quality Assurance Site Assessment” means a documented site inspection to verify the functionality and performance of the [SWPPP](#) and for determining if construction, operation and maintenance accurately comply with permit requirements as presented in the narrative, engineering specifications, maps, plans, drawings and details for EPSC measures and stormwater management.

“Registered Engineer” and **“Registered Landscape Architect”** An engineer or landscape architect certified and registered by the [State Board of Architectural and Engineer Examiners](#) pursuant to Section 62-202, Tennessee Code Annotated, to practice in Tennessee.

“Runoff coefficient” means the fraction of total rainfall that will appear at the conveyance as runoff. Runoff coefficient is also defined as the ratio of the amount of water that is not absorbed by the surface to the total amount of water that falls during a rainstorm.

“Sediment” means solid material, both inorganic (mineral) and organic, that is in suspension, is being transported; or has been moved from the site of origin by wind, water, gravity or ice as a product of erosion.

“Sediment basin” A temporary basin consisting of an embankment constructed across a wet weather conveyance, an excavation that creates a basin or by a combination of both. A sediment basin typically consists of a forebay cell, dam, impoundment, permanent pool, primary spillway, secondary or emergency spillway and surface dewatering device. The size and shape of the basin depends on the location, size of drainage area, incoming runoff volume and peak flow, soil type and particle size, land cover, and receiving stream classification (i.e., waters with unavailable parameters, Exceptional TN Waters, or waters with available parameters).

“Sedimentation” means the action or process of forming or depositing sediment.

“Significant contributor of pollutants to waters of the state” means any discharge containing pollutants that are reasonably expected to cause or contribute to a violation of a water quality criteria or receiving stream designated uses.

“Soil” means the unconsolidated mineral and organic material on the immediate surface of the earth that serves as a natural medium for the growth of plants.

“Steep Slope” means a natural or created slope of 35% grade or greater. Designers of sites with steep slopes must pay attention to stormwater management in the [SWPPP](#) to engineer runoff around or over a steep slope so as not to erode the slope. In addition, site managers should focus on erosion prevention on the slopes and stabilize the slopes as soon as practicable to prevent slope failure or sediment discharges from the project.

“Stormwater” means rainfall runoff, snow melt runoff, and surface runoff and drainage.

A **“Stream”** is a surface water that is not a wet weather conveyance. Therefore, as used in this permit, “stream” includes lakes, wetlands and other non-linear surface waters.

“Stormwater associated with industrial activity” is defined in [40 CFR 122.26\(b\)\(14\)](#) and incorporated here by reference. Most relevant to this permit is [40 CFR 122.26\(b\)\(14\)\(x\)](#), which relates to construction activity including clearing, grading, filling and excavation activities, including borrow pits containing erodible material. Disturbance of soil for the purpose of crop production is exempt from permit requirements, but stormwater discharges from agriculture-related activities that involve construction of structures (e.g., barn construction, road construction, pond construction) are considered associated with industrial activity. Maintenance to the original line and grade, hydraulic capacity; or to the original purpose of the facility (e.g., re-clearing, minor excavation performed around an existing structure necessary for maintenance or repair and repaving of an existing road) is not considered a construction activity for the purpose of this permit.

“Stormwater discharge-related activities” means activities that cause, contribute to or result in point source stormwater pollutant discharges. These activities may include excavation, site development, grading and other surface disturbance activities; and activities to control stormwater including the siting, construction and operation of best management practices (BMPs).

“Stormwater Pollution Prevention Plan” (SWPPP) means a written plan required by this permit that includes a site map, a description of construction activities that could introduce pollutants to stormwater runoff and a description of measures or practices to control these pollutants. It must be prepared and approved before construction begins. In order to effectively reduce erosion and sedimentation impacts, Best Management Practices (BMPs) must be designed, installed and maintained during land disturbing activities. The SWPPP should be prepared in accordance with the [Tennessee Erosion and Sediment Control Handbook](#). The handbook is designed to provide information to planners, developers, engineers and contractors on the proper selection, installation and maintenance of BMPs. The handbook is intended for use during the design and construction of projects that require erosion and sediment controls to protect [waters of the state](#). It also aids in the development of SWPPPs and other reports, plans or specifications required when participating in Tennessee's water quality regulations.

“Take” of an endangered species means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct.

“Temporary stabilization” is achieved when vegetation or non-erodible surface has been established on the area of disturbance and construction activity has temporarily ceased. Under certain conditions, temporary stabilization is required when construction activities temporarily cease. However, if future construction activity is planned, permit coverage continues.

“Total maximum daily load” (TMDL) means the sum of the individual wasteload allocations for point sources and load allocations for nonpoint sources and natural background ([40 CFR 130.2\(I\)](#)). TMDL is a study that quantifies the amount of a pollutant in a stream, identifies the sources of the pollutant and recommends regulatory or other actions that may need to be taken in order for the stream to cease being polluted. TMDLs can also be described by the following equation:

$$\text{TMDL} = \text{sum of non point sources (LA)} + \text{sum of point sources (WLA)} + \text{margin of safety}$$

A list of completed TMDLs that have been approved by EPA can be found at our web site: <http://www.tn.gov/environment/article/wr-ws-tennessees-total-maximum-daily-load-tmdl-program>.

“Treatment chemicals” are polymers, flocculants or other chemicals used to reduce turbidity in stormwater discharges by chemically bonding to suspended silts and other soil materials and causing them to bind together and settle out. Common examples of anionic treatment chemicals are chitosan and anionic PAM.

“Turbidity” is the cloudiness or haziness of a fluid caused by individual particles (suspended solids) that are generally invisible to the naked eye, similar to smoke in air.

“Waste site” is an area where material from a construction site is disposed of. When the material is erodible, such as soil, the site must be treated as a construction site.

“Waters” or **“waters of the state”** means any and all water, public or private, on or beneath the surface of the ground, which are contained within, flow through, or border upon Tennessee or any portion thereof except, those bodies of water confined to and retained within the limits of private property in single ownership which do not combine or effect a junction with natural surface or underground waters.

“Waters with unavailable parameters” means any segment of surface waters that has been identified by the division as failing to support one or more classified uses. For the purpose of this permit, pollutants of concern include, but are not limited to: siltation (silt/sediment) and habitat alterations due to in-channel erosion. Based on the most recent assessment information available to staff, the division will notify applicants and permittees if their discharge is into, or is affecting, waters with unavailable parameters. Resources to be used in making this determination include biennial compilations of impaired waters, databases of assessment information, updated [GIS coverages \(http://tdeconline.tn.gov/dwrwqa/\)](http://tdeconline.tn.gov/dwrwqa/), and the results of recent field surveys. [GIS coverages of the streams and lakes not meeting water quality standards, plus the biennial list of waters with unavailable parameters, can be found at http://tn.gov/environment/article/wr-wq-water-quality-reports-publications.](http://tn.gov/environment/article/wr-wq-water-quality-reports-publications)

“Wet weather conveyances” are man-made or natural watercourses, including natural watercourses that have been modified by channelization, that meet the following:

- a) The conveyance carries flow only in direct response to precipitation runoff in its immediate locality.
- b) The conveyance’s channels are at all times above the ground water table.
- c) The flow carried by the conveyance is not suitable for drinking water supplies.
- d) Hydrological and biological analyses indicate that, due to naturally occurring ephemeral or low flow under normal weather conditions, there is not sufficient water to support fish or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months. (Tennessee Rules, Chapter [0400-40-3-.04\(3\)](#)).

11. LIST OF ACRONYMS

ARAP	Aquatic Resource Alteration Permit
BMP	Best Management Practice
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CGP	Construction General Permit
CWA	Clean Water Act
EFO	Environmental Field Office
EPA	(U.S.) Environmental Protection Agency
EPSC	Erosion Prevention and Sediment Control
MS4	Municipal Separate Storm Sewer System
NOC	Notice of Coverage
NOI	Notice of Intent
NOT	Notice of Termination
NPDES	National Pollutant Discharge Elimination System
ONRW	Outstanding National Resource Waters
POTW	Publicly Owned Treatment Works
QLP	Qualifying Local Program
SWPPP	Stormwater Pollution Prevention Plan

Tennessee General Permit No. TNR100000
Stormwater Discharges from Construction Activities

TDEC	Tennessee Department of Environment and Conservation
TDOT	Tennessee Department of Transportation
TMDL	Total Maximum Daily Load
TMSP	Tennessee Multi-Sector General Permit for the Discharge of Stormwater from an Industrial Activity
TVA	Tennessee Valley Authority
TWQCA	Tennessee Water Quality Control Act
UIC	Underground Injection Control
USGS	United States Geological Survey

(End of body of permit; appendices follow.)

Appendix B

Soil Map & Description

Soil Map—Williamson County, Tennessee
(Franklin WRF)



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

MAP LEGEND

	Area of Interest (AOI)		Spoil Area
	Area of Interest (AOI)		Story Spot
	Soils		Very Story Spot
	Soil Map Unit Polygons		Wet Spot
	Soil Map Unit Lines		Other
	Soil Map Unit Points		Special Line Features
	Special Point Features		Water Features
	Blowout		Streams and Canals
	Borrow Pit		Transportation
	Clay Spot		Rails
	Closed Depression		Interstate Highways
	Gravel Pit		US Routes
	Gravelly Spot		Major Roads
	Landfill		Local Roads
	Lava Flow		Background
	Marsh or swamp		Aerial Photography
	Mine or Quarry		
	Miscellaneous Water		
	Perennial Water		
	Rock Outcrop		
	Saline Spot		
	Sandy Spot		
	Severely Eroded Spot		
	Sinkhole		
	Slide or Slip		
	Sodic Spot		

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Williamson County, Tennessee

Survey Area Data: Version 11, Sep 11, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Data not available.

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Williamson County, Tennessee (TN187)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
ArA	Armour silt loam, 0 to 2 percent slopes	16.4	7.2%
ArB	Armour silt loam, 2 to 5 percent slopes	13.7	6.0%
ArB2	Armour silt loam, 2 to 5 percent slopes, eroded	31.0	13.6%
ArC	Armour silt loam, 5 to 12 percent slopes	1.8	0.8%
ArC2	Armour silt loam, 5 to 12 percent slopes, eroded	14.4	6.3%
AtC3	Armour silty clay loam, 5 to 12 percent slopes, severely eroded	3.9	1.7%
Eg	Egam silt loam, phosphatic	6.2	2.7%
Hu	Huntington silt loam, phosphatic	68.7	30.3%
Lp	Lindell silt loam, 0 to 2 percent slopes, occasionally flooded	2.0	0.9%
MbB2	Maury silt loam, 2 to 5 percent slopes, eroded	25.5	11.2%
MbC2	Maury silt loam, 5 to 12 percent slopes, eroded	25.8	11.4%
McC3	Maury silty clay loam, 5 to 12 percent slopes, severely eroded	5.6	2.5%
Rc	Rockland	5.7	2.5%
W	Water	6.4	2.8%
Totals for Area of Interest		226.9	100.0%

Appendix C

Calculations

Calculations

Areas:

Total Site Area = 109.6 acres

Total Disturbed Area = 40.3 Acres

Impervious Area

Existing: 5.49 acres

Proposed: 4.54 acres

Total: 10.03 acres

Existing Coefficient of Runoff:

Other than the improved areas of the site, the land cover is predominantly maintained lawn or meadow.

The predominant Hydrologic Soil Group for the site is group "B" with some "A". A conservative **C = 0.21** has been assigned for the undeveloped non-impervious undeveloped portions of the site.

Post Construction Coefficient of Runoff:

Impervious Area = 10.03 acres

Pervious Area = 99.57 acres

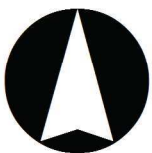
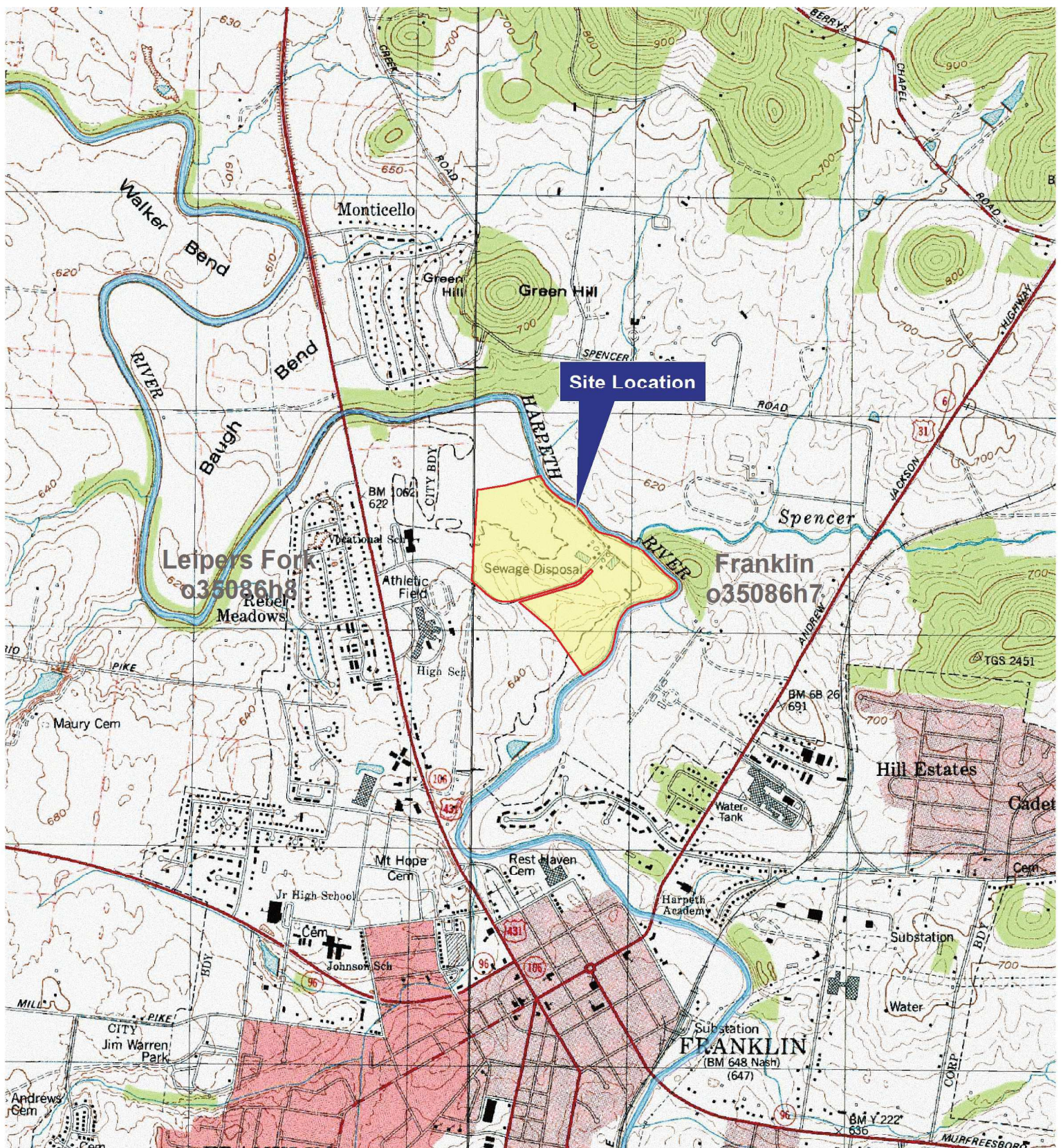
Total Percentage Impervious = 9.15%

Weighted C = $[(10.03 \times 0.96) + (99.57 \times 0.21)] / 109.6 = \mathbf{0.28}$

Appendix D

Figures

FIGURE 1: SITE LOCATION MAP



Data Sources:
Imagery: USGS Quad Map

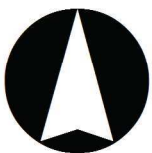
**City of Franklin Water Reclamation Facility
Modifications & Expansion Project, Franklin
Williamson Co., TN**

0 750 1,500 3,000 4,500 6,000 Feet

CIA CIVIL
INFRASTRUCTURE
ASSOCIATES

307 Hickerson Drive, Murfreesboro, TN 37129
(615) 663-7678 www.cia-engineers.com

FIGURE 2: SITE MAP



Data Sources:
Imagery: BING Maps

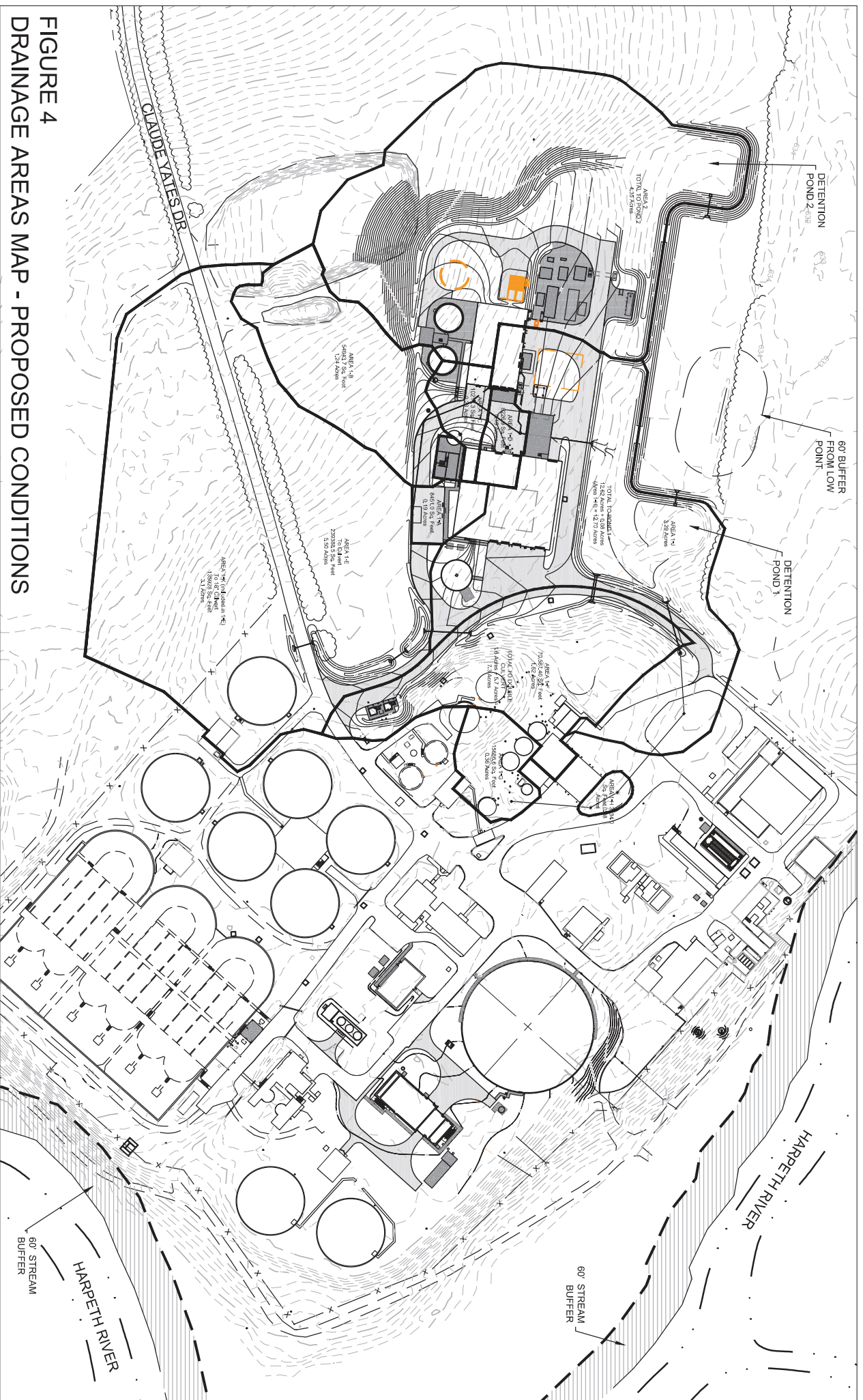
0 190 380 760 1,140 1,520 Feet

**City of Franklin Water Reclamation Facility
Modifications & Expansion Project, Franklin
Williamson Co., TN**



307 Hickerson Drive, Murfreesboro, TN 37129
(615) 663-7678 www.cia-engineers.com





Appendix E

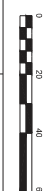
Grading and Drainage Plans

**(Including “General Civil Notes and Legend”, and
“Site Layout and Key Map” Sheets)**



NO.	DATE	DOWN	CHNG	REVISIONS
1	11/14	11/14	11/14	11/14
2	11/14	11/14	11/14	11/14
3	11/14	11/14	11/14	11/14
4	11/14	11/14	11/14	11/14
5	11/14	11/14	11/14	11/14
6	11/14	11/14	11/14	11/14
7	11/14	11/14	11/14	11/14
8	11/14	11/14	11/14	11/14
9	11/14	11/14	11/14	11/14
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REFER TO PLAN SHEET C-1 FOR
GENERAL GRADING & DRAINAGE
NOTES & LEGEND.

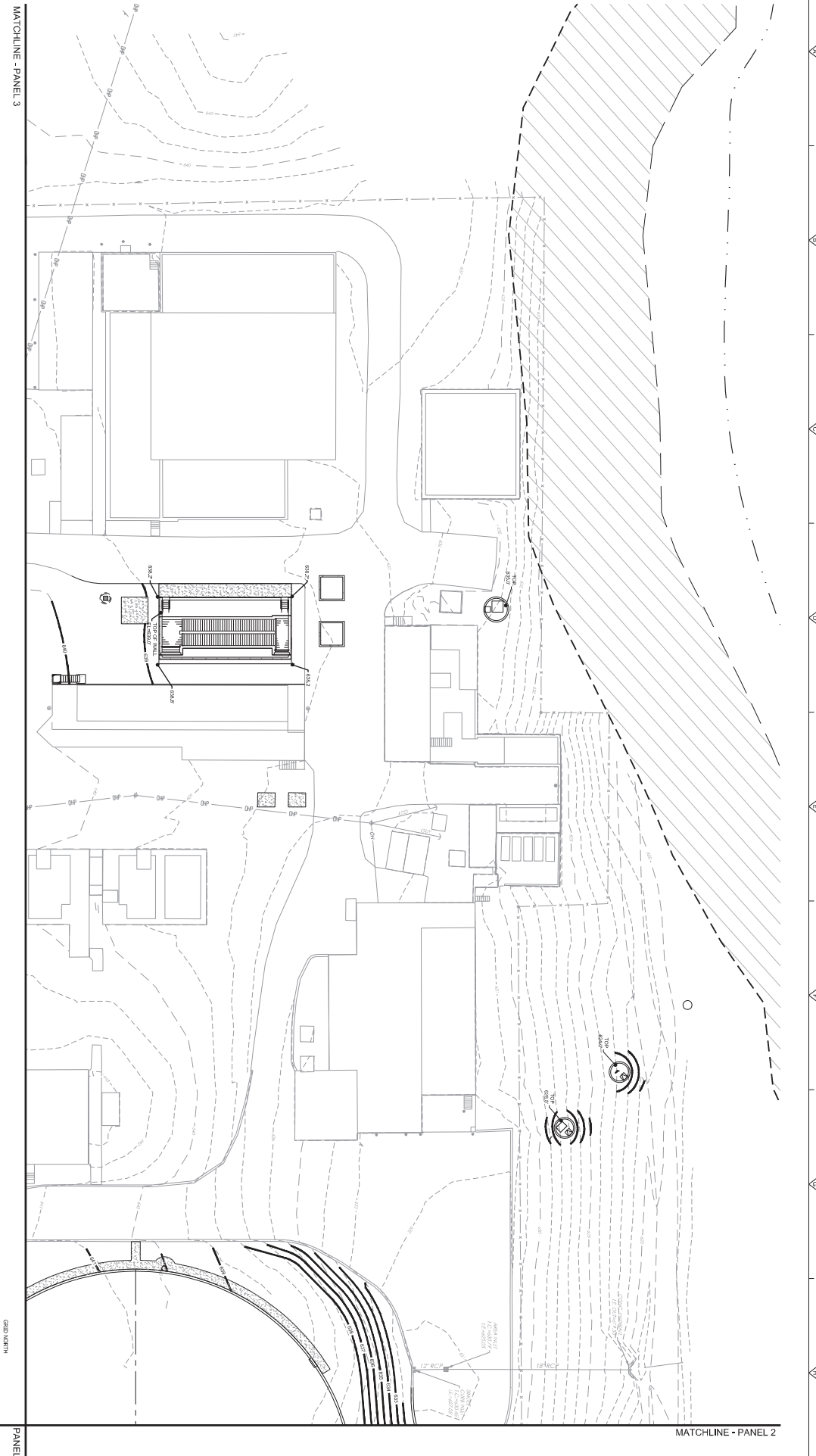


GRADING AND DRAINAGE PLAN
PANEL 1

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COP CONTRACT NO. 2017-0264

C-28

CONFORMED DRAWING - AUGUST 2018



DESIGNED BY	TJL
DRAWN BY	BRN
CHECKED BY	BRN
APPROVED BY	T. HANSAARD
DATE	APRIL 2018



CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COP CONTRACT NO. 2017-0264

GRADING AND DRAINAGE PLAN
PANEL 2

REFER TO PLAN SHEET C-1 FOR
GENERAL GRADING & DRAINAGE
NOTES & LEGEND.



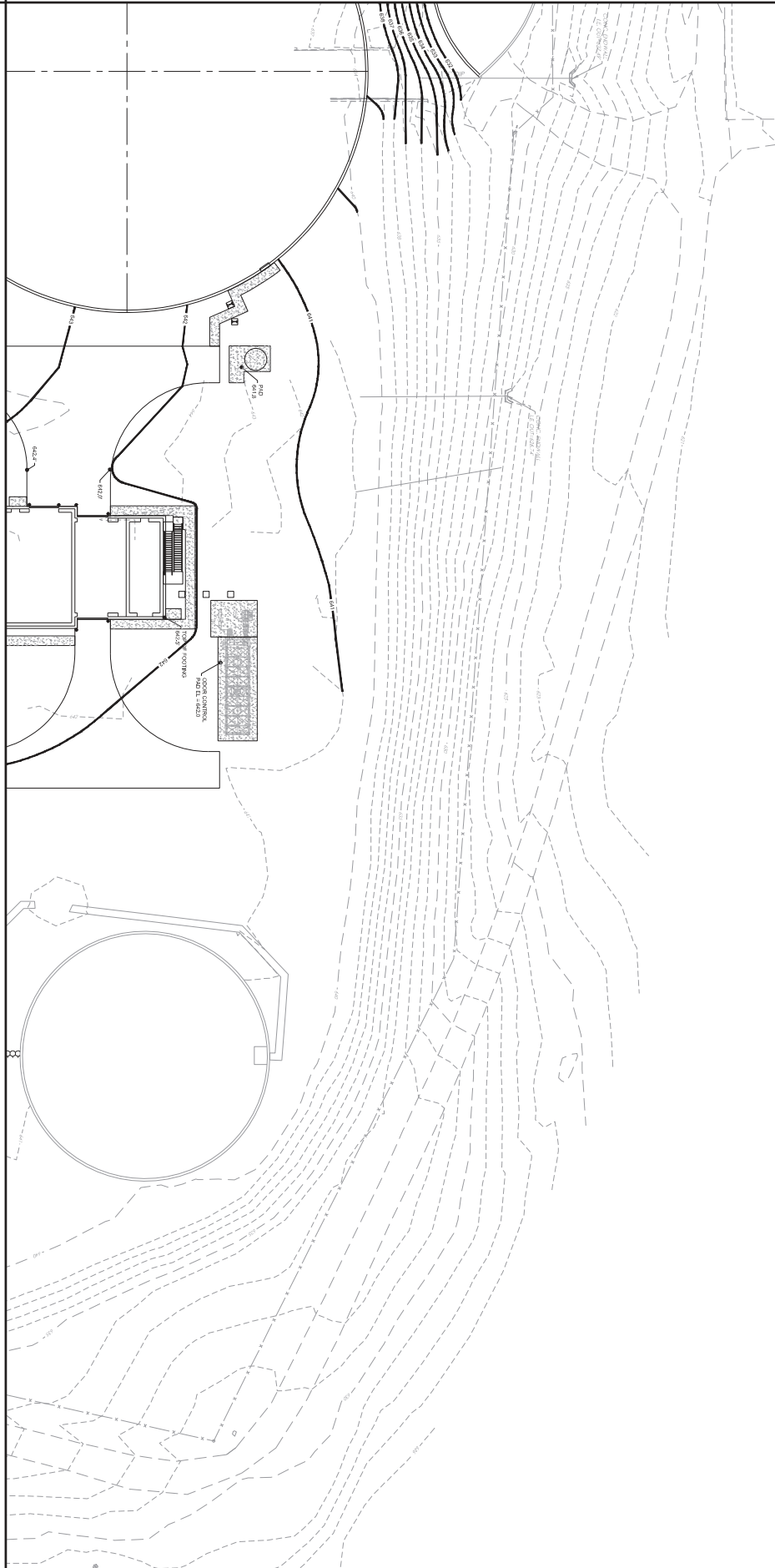
PROJECT NO. 17-00000000
SHEET NO. C-29

PANEL 3

MATCHLINE - PANEL 1

GRID NORTH

MATCHLINE - PANEL 4



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DESIGNED BY	TLU
DRAWN BY	TLU
CHECKED BY	TLU
IN CHARGE	TLU
APPROVED BY	TLU
DATE	APRIL 2018



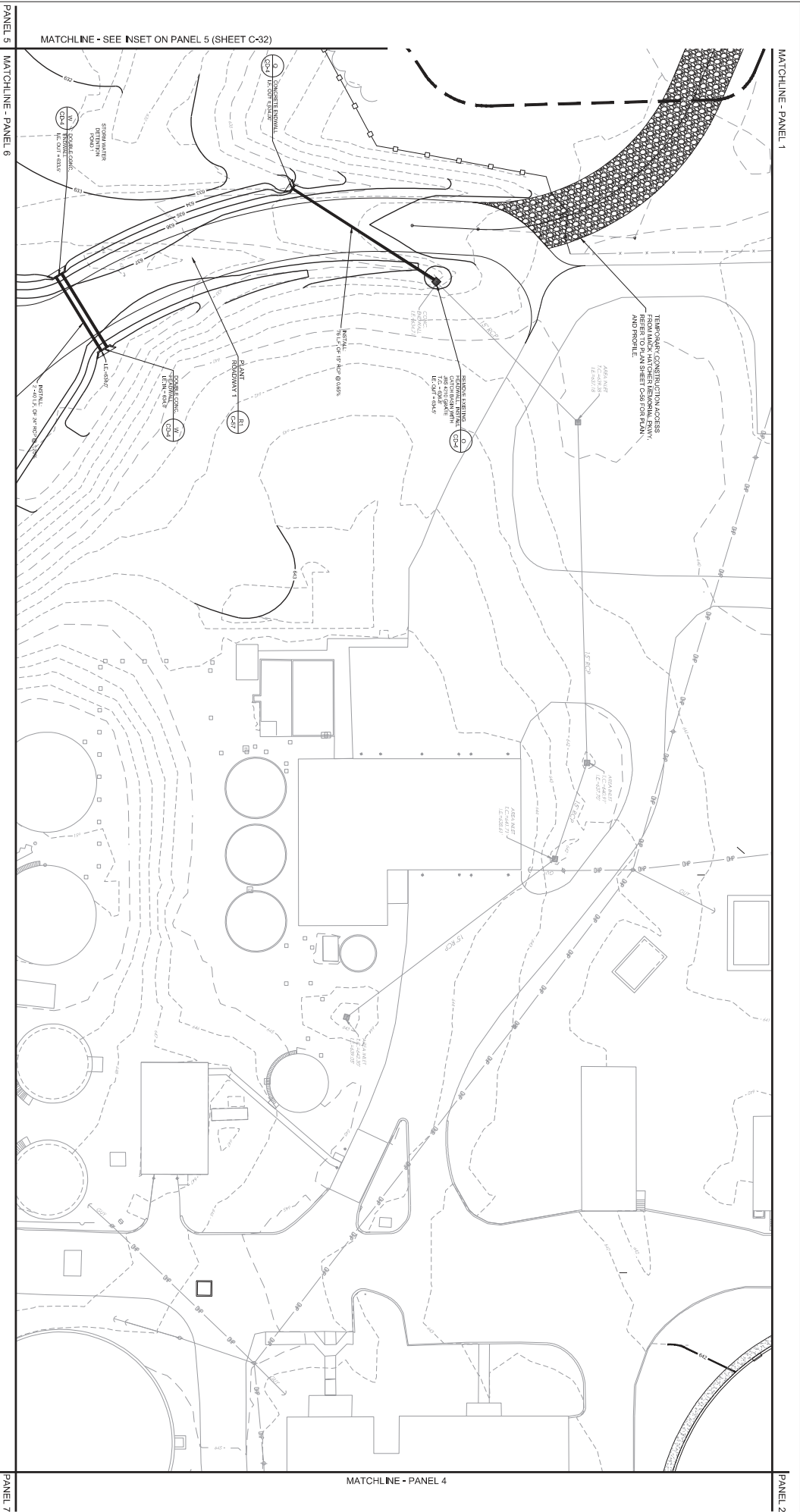
CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COP CONTRACT NO. 2017-0264

GRADING AND DRAINAGE PLAN
PANEL 3

REFER TO PLAN SHEET C-1 FOR
GENERAL GRADING & DRAINAGE
NOTES & LEGEND.



PROJECT NO. 17-0264
SHEET NO. C-30



DESIGNED BY	TLL
DRAWN BY	BN
CHECKED BY	BN
APPROVED BY	T. HANSEN
DATE	APRIL 2018
NO.	
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CHG	
REVISIONS	



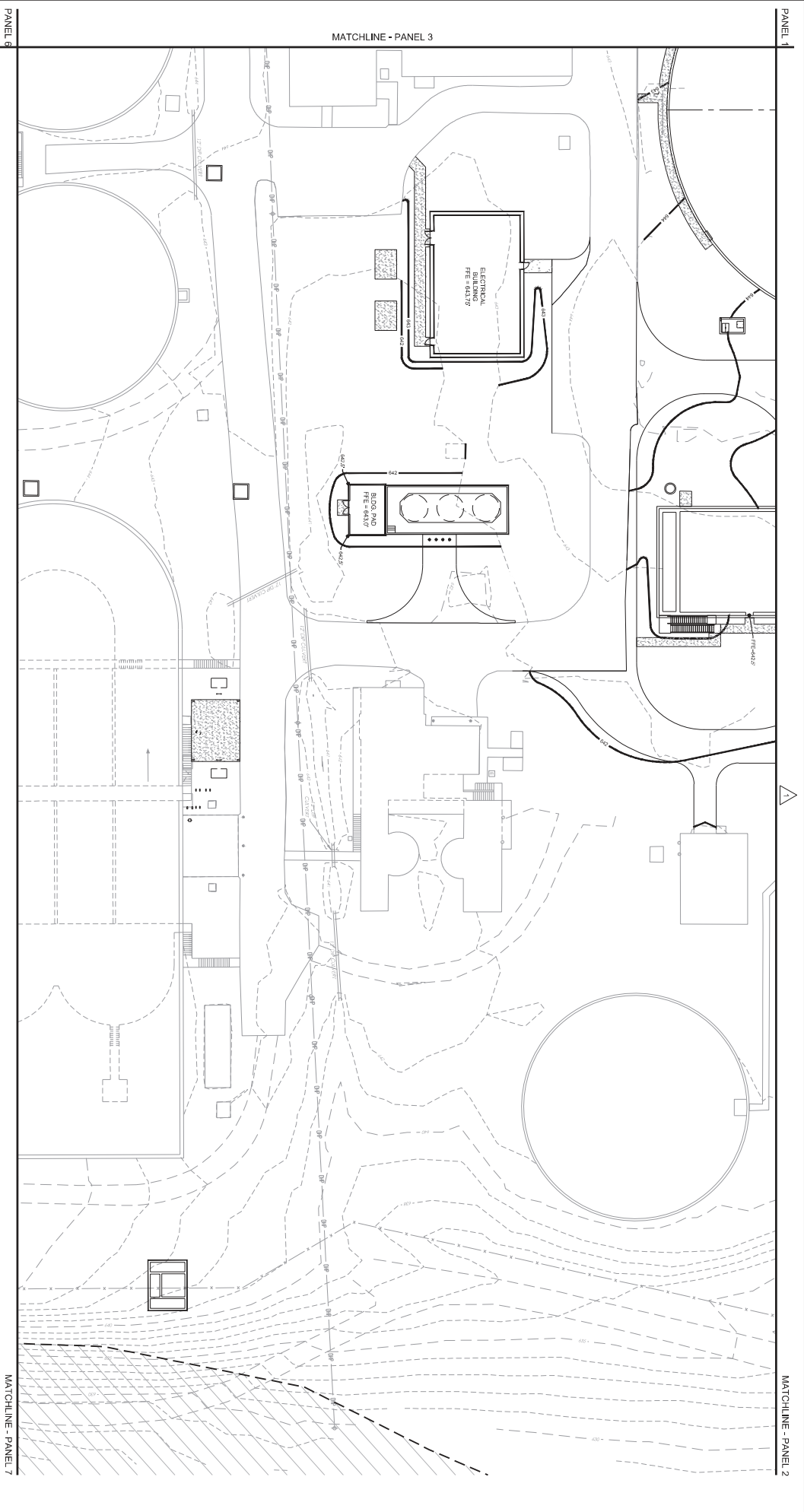
CITY OF FRANKLIN, TENNESSEE
 WATER RECLAMATION FACILITY
 MODIFICATIONS AND EXPANSION PROJECT
 CIP CONTRACT NO. 2017-0264

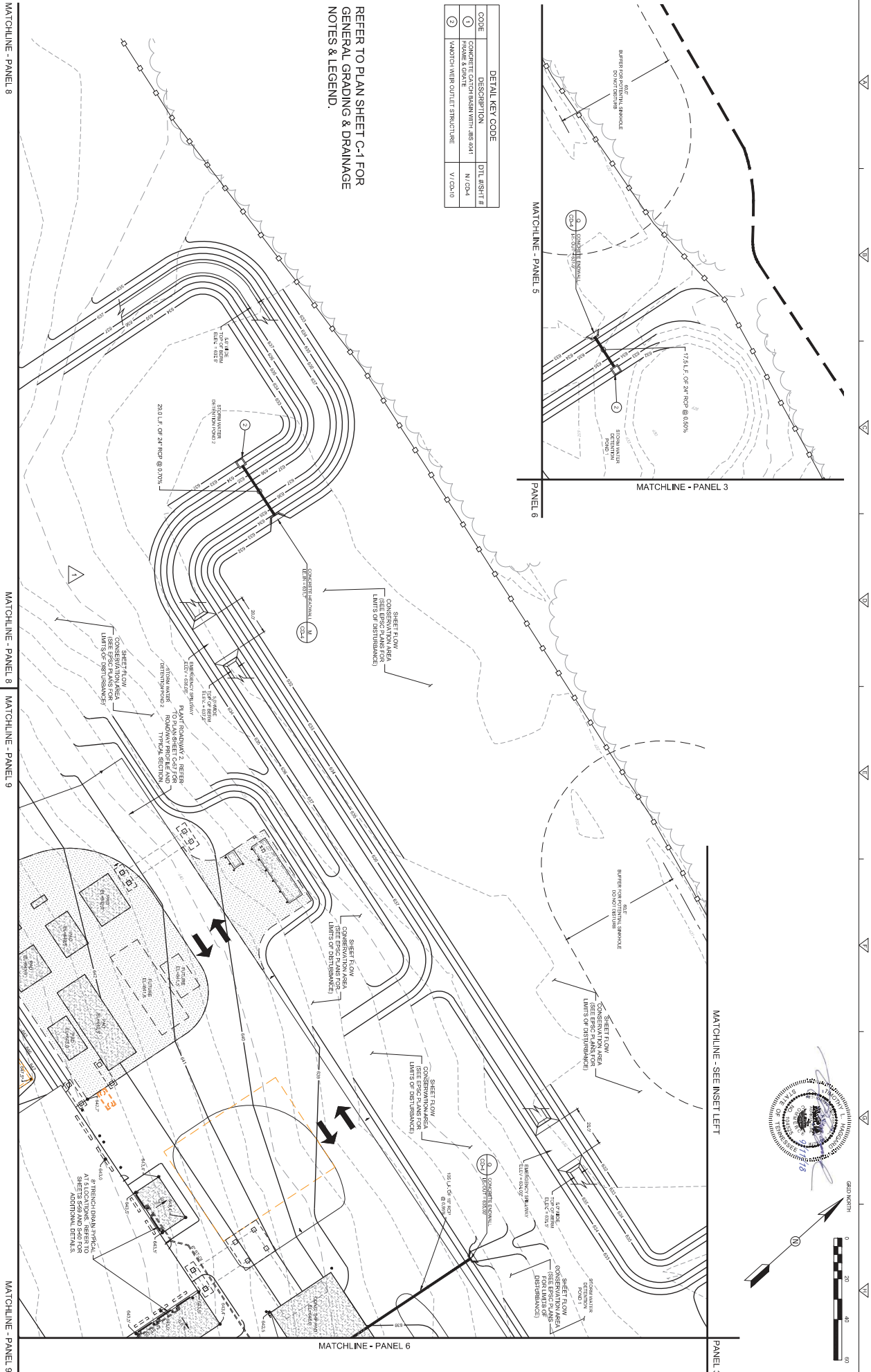
GRADING AND DRAINAGE PLAN
 PANEL 4

C-31

PROJECT NO. 17-0264
 SHEET NO. C-31

REFER TO PLAN SHEET C-1 FOR
 GENERAL GRADING & DRAINAGE
 NOTES & LEGEND.





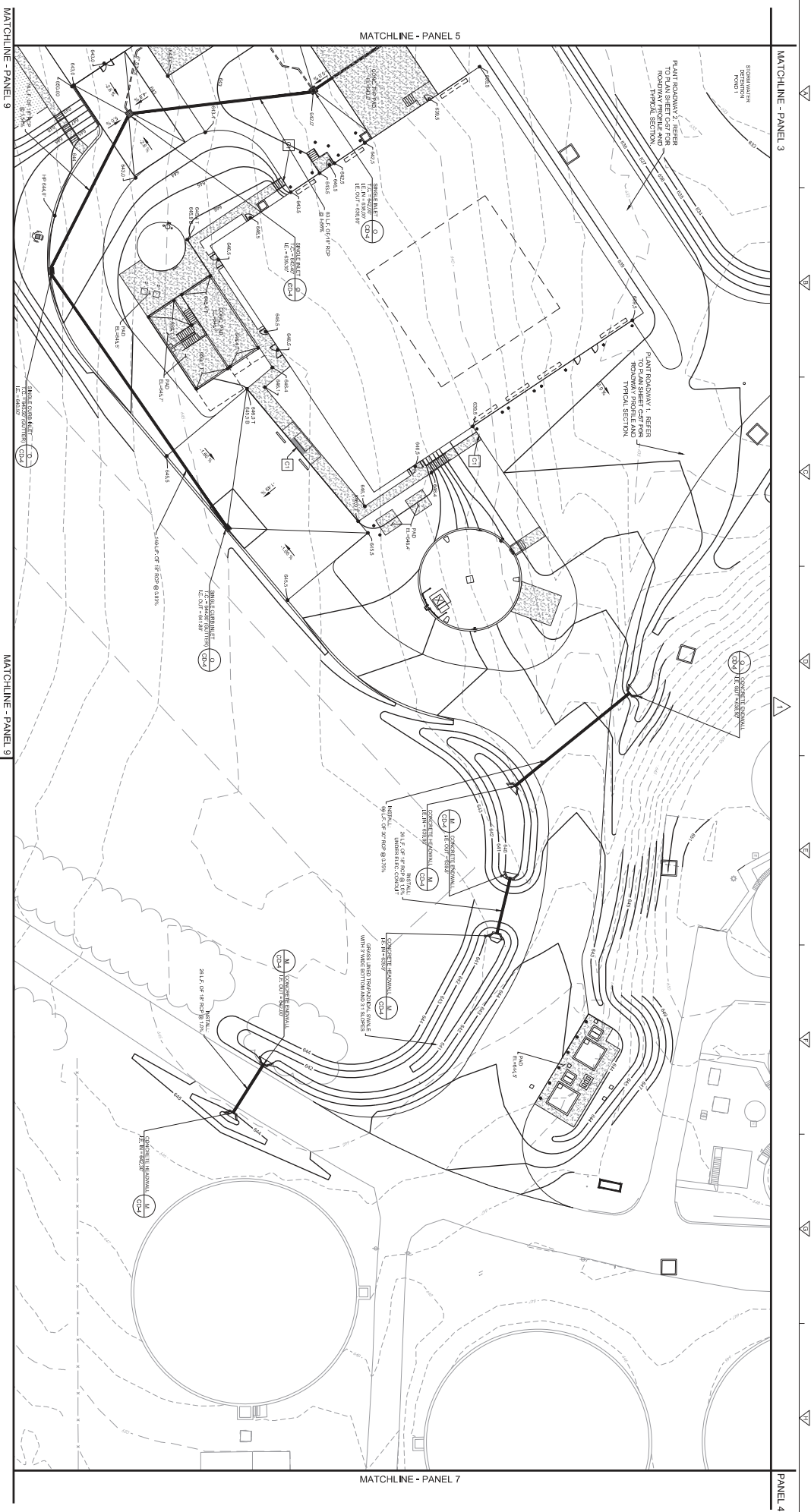
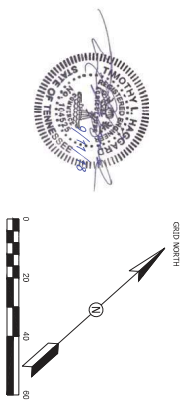
**CDM
Smith**
210 25th Avenue North, Suite 1102
Nashville, TN 37203
Tel: (615) 320-3161

QIN
INTERNATIONAL
207 Lakeside Drive
Madison, TN 37129
Tel: (615) 663-1878

GRADING AND DRAINAGE PLAN PANEL 5	PROJECT NO. 1481-0068-000 FILE NAME 0481-0068-000
	SHEET NO. C-32

GRADING AND DRAINAGE PLAN PANEL 6	PROJECT NO. 14415-0000-1-1008 TITLE NAME CDF_WRF_COIL
	SHEET NO. C-33

REFER TO PLAN SHEET C-1 FOR
GENERAL GRADING & DRAINAGE
NOTES & LEGEND.

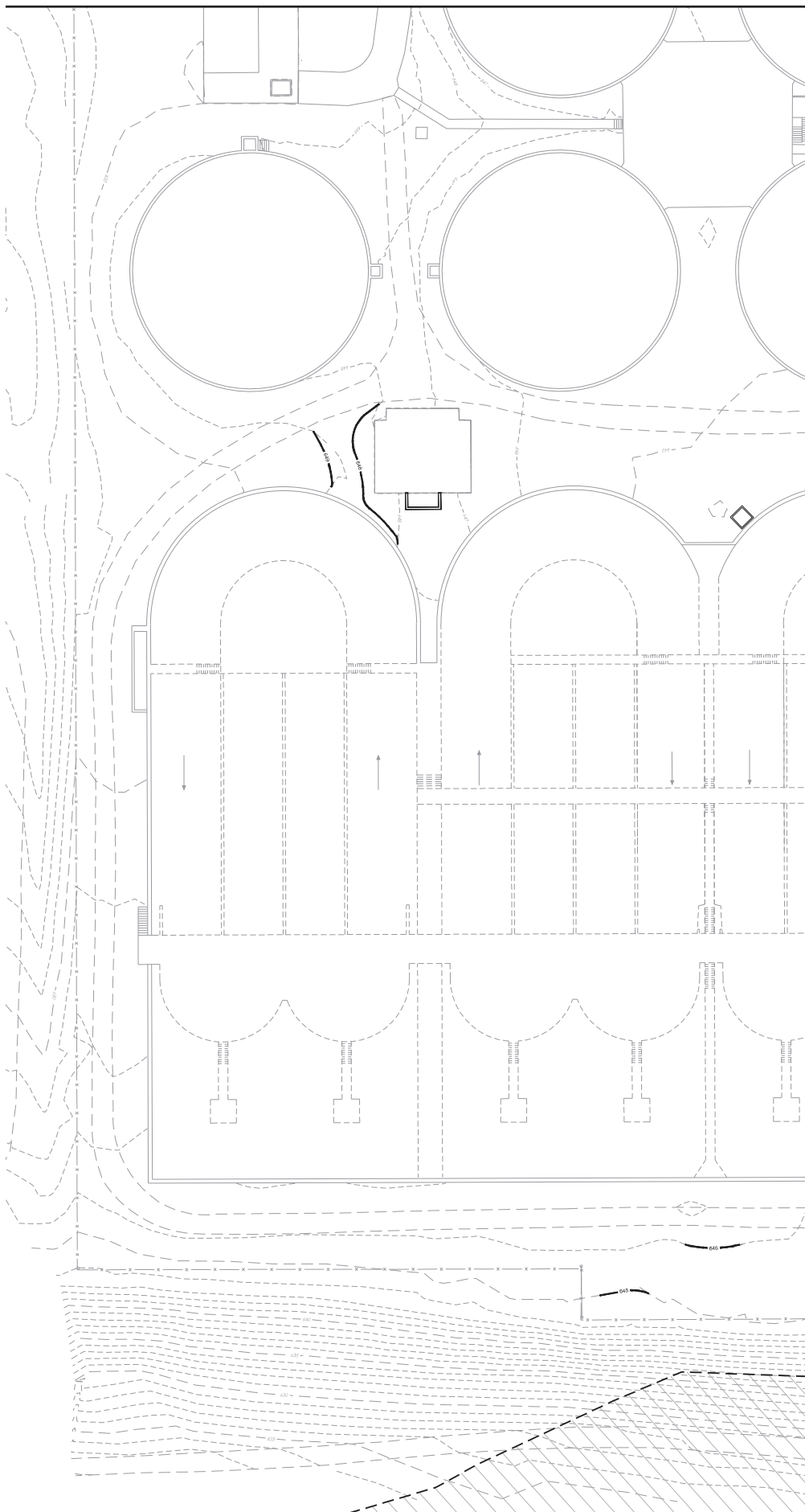


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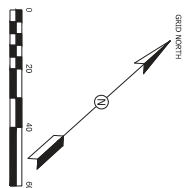
MATCHLINE - PANEL 6

PANEL 3

MATCHLINE - PANEL 4



REFER TO PLAN SHEET C-1 FOR
GENERAL GRADING & DRAINAGE
NOTES & LEGEND.



GRADING AND DRAINAGE PLAN
PANEL 7

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COT CONTRACT NO. 0047-0004

CONFORMED DRAWING - AUGUST 2018

NO.	DATE	BY	CHKD	REVISIONS
1	11/14/18	TH	TH	CONFORMED DRAWING
2	11/14/18	TH	TH	REVISION FOR BID CHANGES
3	11/14/18	TH	TH	REVISIONS



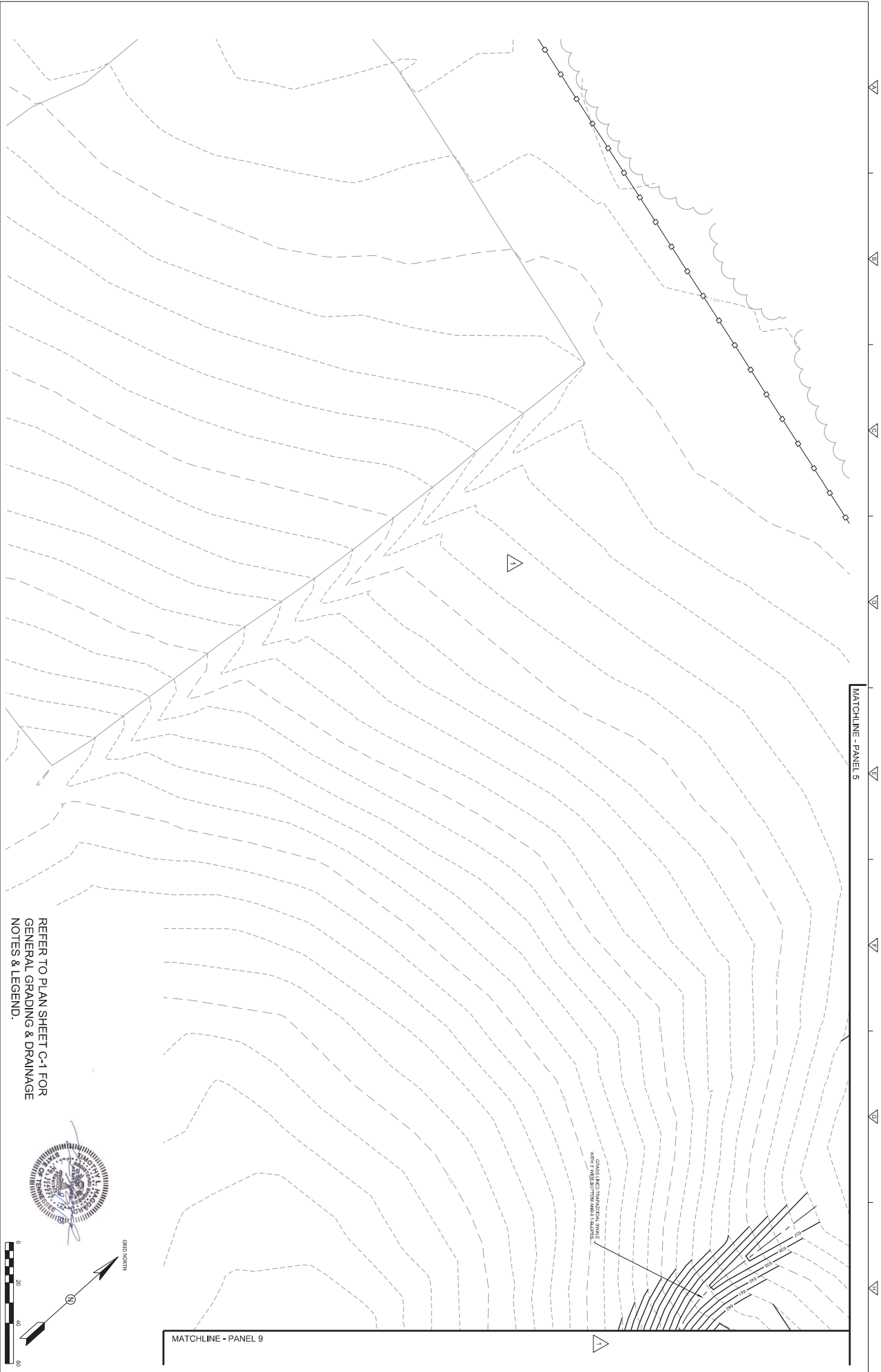
CDM Smith
 14100 E. 15th Avenue, Suite 1102
 Denver, CO 80231
 Tel: 303.733.3333



CITY OF FRANKLIN, TENNESSEE
 201 Franklin Drive
 Franklin, TN 37067
 Tel: 615.862.4278

CITY OF FRANKLIN, TENNESSEE
 WATER RECLAMATION FACILITY
 MODIFICATIONS AND EXPANSION PROJECT
 CIP CONTRACT NO. 2017-0264

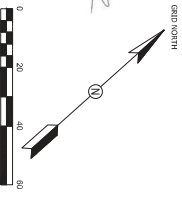
GRADING AND DRAINAGE PLAN
 PANEL 8



MATCHLINE - PANEL 5

MATCHLINE - PANEL 9

REFER TO PLAN SHEET C-1 FOR
 GENERAL GRADING & DRAINAGE
 NOTES & LEGEND.



[illegible]

CDM Smith
210 25th Avenue North, Suite 1102
Nashville, TN 37203
Tel: (615) 320-3181

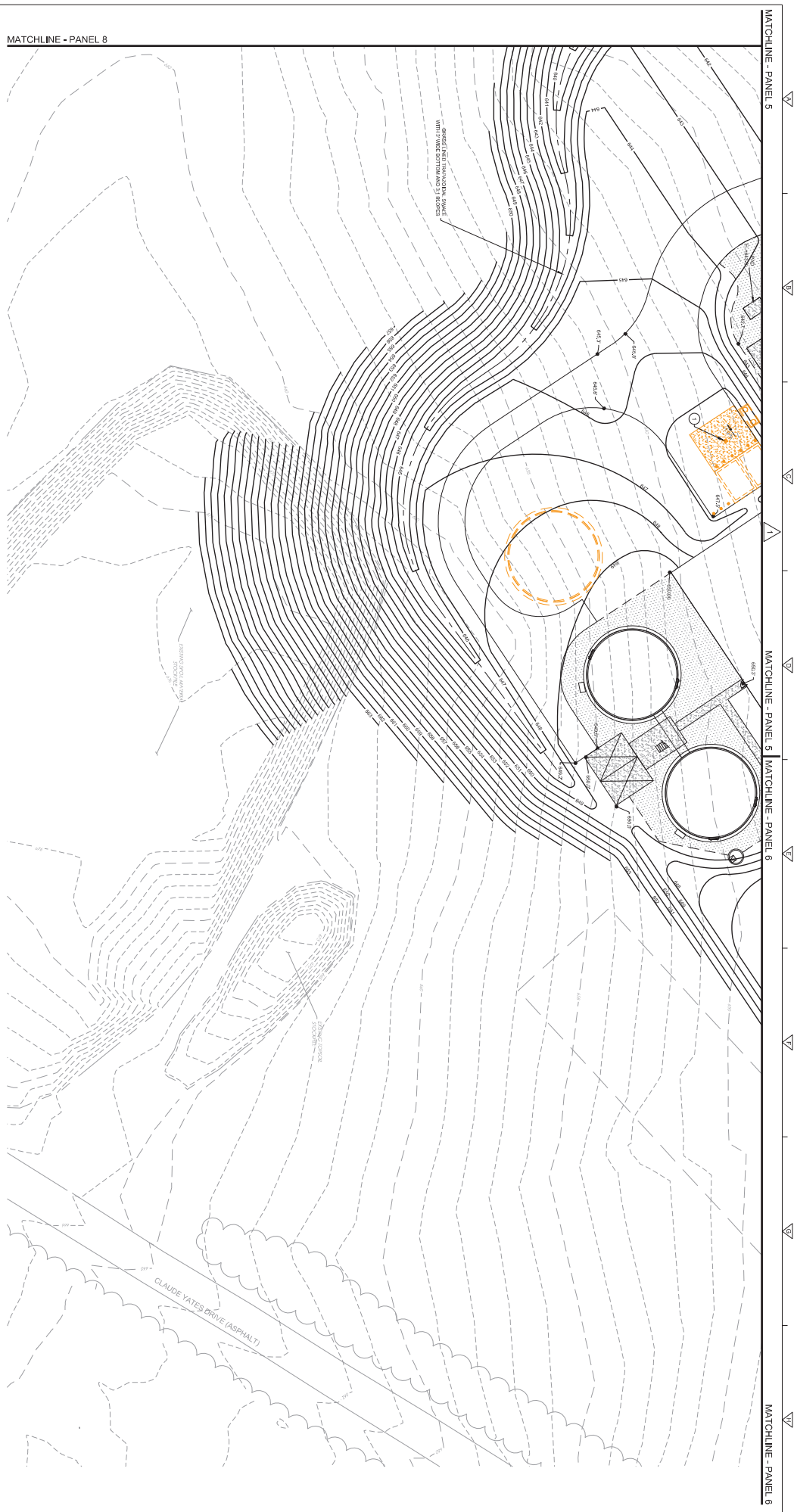
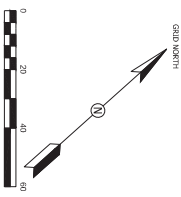
QIN INC.
307 Hixson Drive
Midwestown, TN 37129
Tel: (615) 663-7678

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COF CONTRACT NO. 2017-0264

GRADING AND DRAINAGE PLAN PANEL 9	PROJECT NO.	14015-00004-0100
	TITLE NAME	CONF. INFV. CONT.
	SHEET NO.	C-37

DETAIL KEY CODE		
CODE	DESCRIPTION	DTL #/SHT #
①	FUTURE CONCRETE CATCH BASIN WITH JBS 40x1 FRAME & GRADE	N / CD-4

REFER TO PLAN SHEET C-1 FOR
GENERAL GRADING & DRAINAGE
NOTES & LEGEND.



Appendix F

Erosion Prevention and Sediment Control Plans



PANEL 4

SPCE	STABILIZED CONSTRUCTION EXT	B/CCH
NALS	WOOD LEVEL SPREADER	C/CCH
GRND	CONCRETE MASH-OUT	S/CCH
SPRD	SEGMENT POND	O/CCH
NALS	STEAM MASH-OUT 3 TONS PER HOUR	N/A
SPRD	TEMPORARY SEEDING	N/A
SPRD	PERMANENT SEEDING	N/A

EROSION PREVENTION & SEDIMENT CONTROL PLAN PANEL 1 - INITIAL PHASE

①
②
③
④

1111

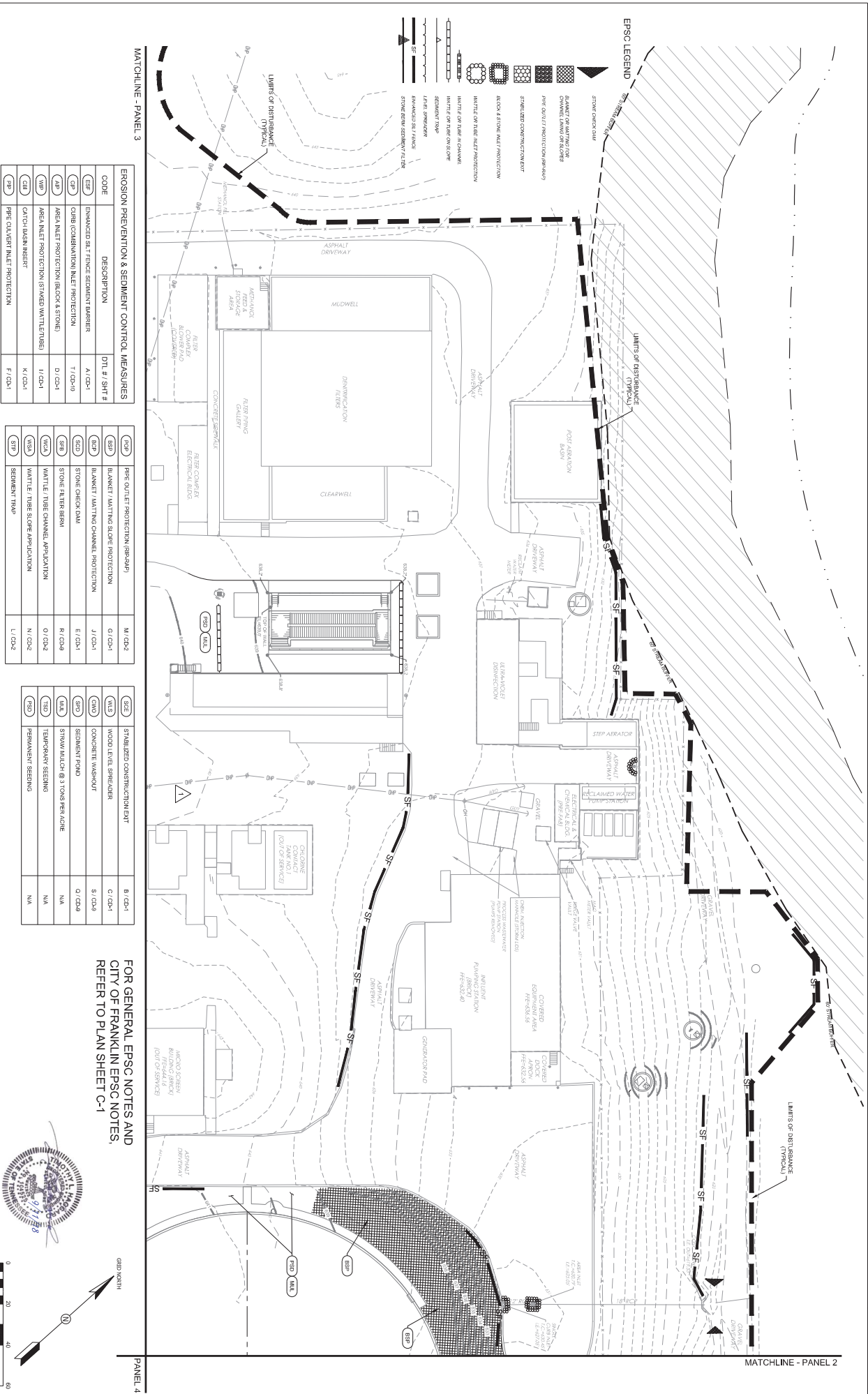


SOE	STABILIZED CONSTRUCTION PAV	B / C-D
NLS	WOOD LEVEL SPREADER	C / C-D
CMD	CONCRETE WASHOUT	B / C-D
SPD	SEMENT POND	C / C-D
NAL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TRD	TEMPORARY SEEDING	N/A
PRD	PERMANENT SEEDING	N/A



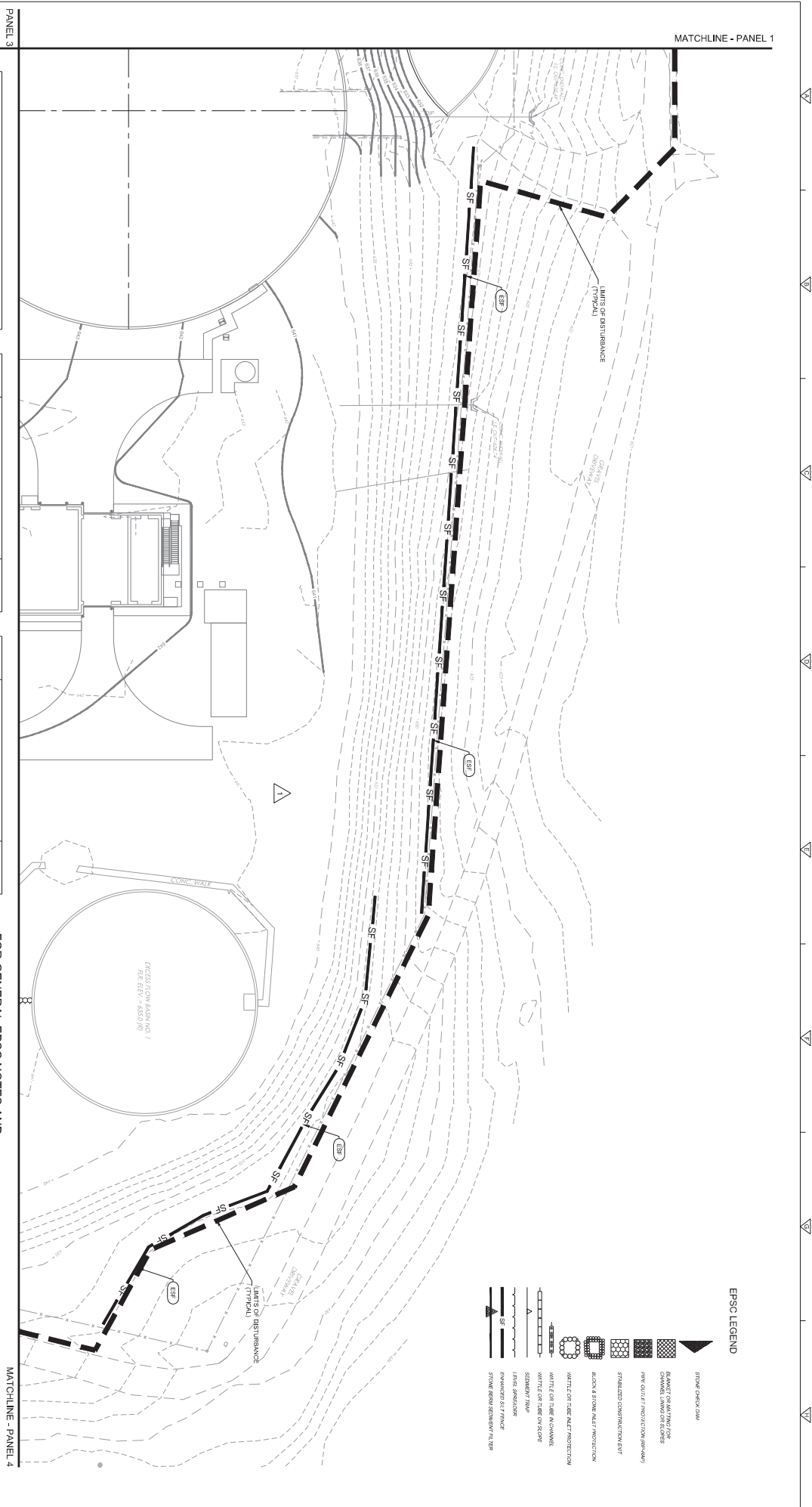
SHEET NO.

NO.	DATE	BY	CHKD	DESCRIPTION	REVISIONS	DESIGNED BY	DRWN BY	CHKD BY	DATE	CDM Smith	CDM Smith	CITY OF FRANKLIN, TENNESSEE WATER RECLAMATION FACILITY MODIFICATIONS AND EXPANSION PROJECT COP CONTRACT NO. 2017-0264	EROSION PREVENTION & SEDIMENT CONTROL PLAN PANEL 1 - FINAL PHASE	PROJECT NO. C-38C
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41	5/21	TH		REVISION FOR PER CHANGES		TH	TH	TH	5/21					
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43	7/21	TH		REVISION FOR PER CHANGES		TH	TH	TH	7/21					
44	8/21	TH		REVISION FOR PER CHANGES		TH	TH	TH	8/21					
45	9/21	TH		REVISION FOR PER CHANGES		TH	TH	TH	9/21					
46	10/21	TH		REVISION FOR PER CHANGES		TH	TH	TH	10/21					
47	11/21	TH		REVISION FOR PER CHANGES		TH	TH	TH	11/21					
48	12/21	TH		REVISION FOR PER CHANGES		TH	TH	TH	12/21					
49	1/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	1/22					
50	2/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	2/22					
51	3/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	3/22					
52	4/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	4/22					
53	5/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	5/22					
54	6/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	6/22					
55	7/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	7/22					
56	8/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	8/22					
57	9/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	9/22					
58	10/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	10/22					
59	11/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	11/22					
60	12/22	TH		REVISION FOR PER CHANGES		TH	TH	TH	12/22					
61	1/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	1/23					
62	2/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	2/23					
63	3/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	3/23					
64	4/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	4/23					
65	5/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	5/23					
66	6/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	6/23					
67	7/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	7/23					
68	8/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	8/23					
69	9/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	9/23					
70	10/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	10/23					
71	11/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	11/23					
72	12/23	TH		REVISION FOR PER CHANGES		TH	TH	TH	12/23					
73	1/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	1/24					
74	2/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	2/24					
75	3/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	3/24					
76	4/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	4/24					
77	5/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	5/24					
78	6/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	6/24					
79	7/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	7/24					
80	8/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	8/24					
81	9/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	9/24					
82	10/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	10/24					
83	11/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	11/24					
84	12/24	TH		REVISION FOR PER CHANGES		TH	TH	TH	12/24					
85	1/25	TH		REVISION FOR PER CHANGES		TH	TH	TH	1/25					
86	2/25	TH		REVISION FOR PER CHANGES		TH	TH	TH	2/25					
87	3/25	TH		REVISION FOR PER CHANGES		TH	TH	TH	3/25					
88	4/25	TH		REVISION FOR PER CHANGES		TH	TH	TH	4/25					
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94	10/25	TH		REVISION FOR PER CHANGES		TH	TH	TH	10/25					
95	11/25	TH		REVISION FOR PER CHANGES		TH	TH	TH	11/25					
96	12/25	TH		REVISION FOR PER CHANGES		TH	TH	TH	12/25					
97	1/26	TH		REVISION FOR PER CHANGES		TH	TH	TH	1/26					
98	2/26	TH		REVISION FOR PER CHANGES		TH	TH	TH	2/26					
99	3/26	TH		REVISION FOR PER CHANGES		TH	TH	TH	3/26					
100	4/26	TH		REVISION FOR PER CHANGES		TH	TH	TH	4/26					



FOR GENERAL EPSC NOTES AND
CITY OF FRANKLIN EPSC NOTES,
REFER TO PLAN SHEET C-1



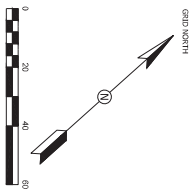


EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DIT # / SHT #
(E9)	ENHANCED SILT FENCE SEDIMENT BARRIER	A / CD-1
(C9)	CULVERT COMBINATION INLET PROTECTION	T / CD-10
(AP)	AREA MUET PROTECTION (BLOCK & TONGE)	D / CD-1
(WP)	AREA MUET PROTECTION (STAKED MATTE TABLE)	I / CD-1
(CB)	CATCH BASIN INSERT	K / CD-1
(AP)	PERFORATED INLET PROTECTION	F / CD-2

600	PIPE OUTLET PROTECTION (RIPRAP)	M / CD2
650	BALANCE / MAINTAIN SLOPE PROTECTION	G / CD1
660	BALANCE / MAINTAIN CHANNEL PROTECTION	J / CD1
670	STONE CHECK DAM	E / CD1
680	STONE FILTER BEDDM	R / CD1
690A	WATTLE / LOG CHANNEL APPLICATION	O / CD2
690B	WATTLE / LOGS SLOPE APPLICATION	N / CD2
699	SEGMENT TRAP	L / CD2

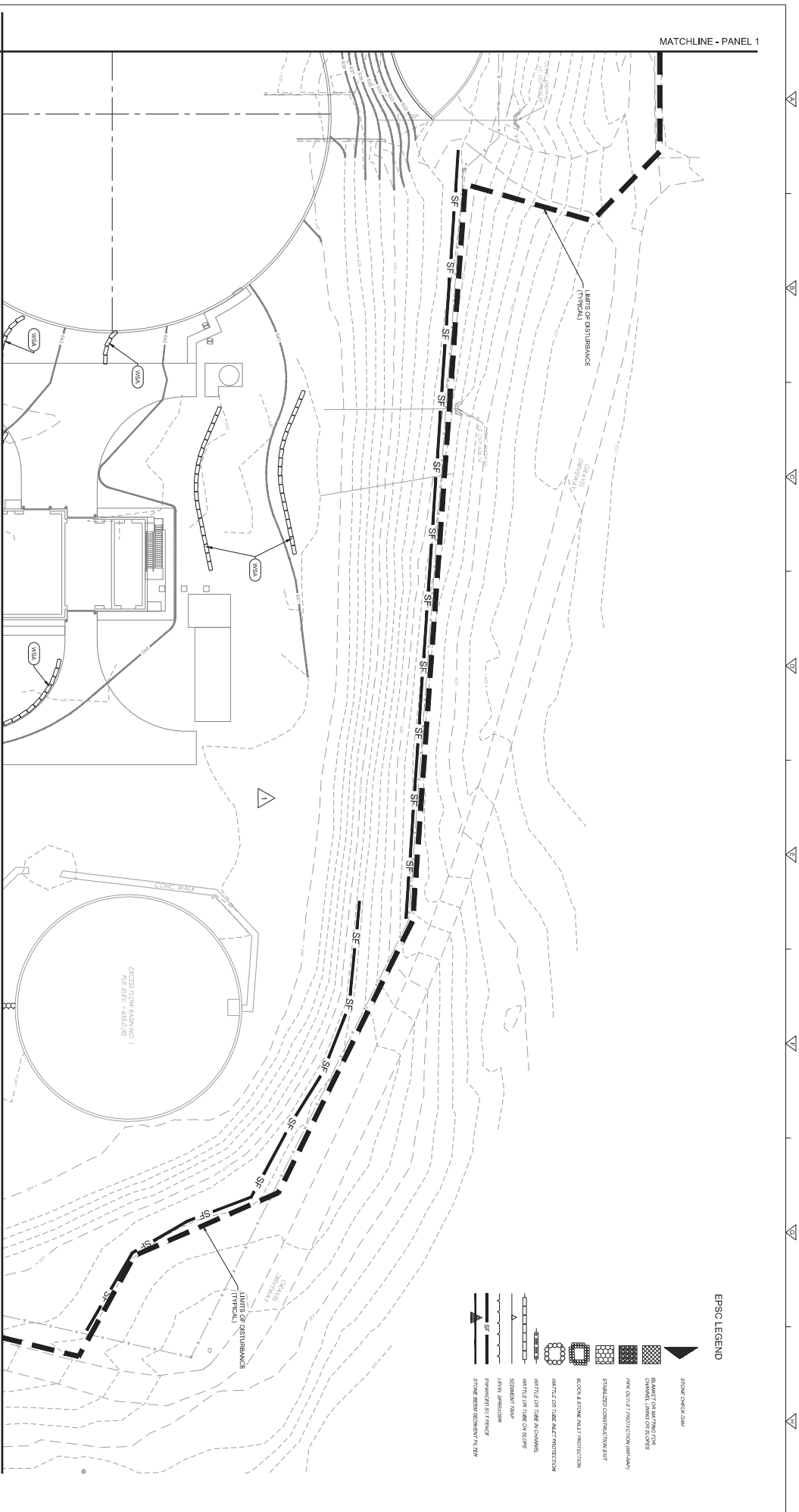
SC2	RAILIZED CONSTRUCTION EXT	B/C0/4
NAS	WOOD LEVER SPREADER	C/C0/4
CNO	CONCRETE WASH/OUT	S/C0/9
SP0	SEEDMENT POND	Q/C0/9
MUL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TR0	TEMPORARY SEEDING	N/A
PR0	PERMANENT SEEDING	N/A

FOR GENERAL EPSC NOTES AND
CITY OF FRANKLIN EPSC NOTES,
REFER TO PLAN SHEET C-1

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY

EROSION PREVENTION & SEDIMENT CONTROL PLAN
PANEL 2 - INITIAL PHASE

PROJECT NO.	14915-96594-WR
FILE NAME:	CoF_WRF_Civ

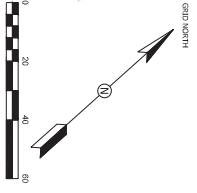


EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DTL #, SRI #
ESP	ENHANCED SILT FENCE SEDIMENT BARRIER	A / CD-1
QIP	QUIK CORMORANT INLET PROTECTION	T / CD-10
IMP	AREA INLET PROTECTION (BLOCK & STONE)	D / CD-4
WIP	AREA INLET PROTECTION (STAKED MATTERLEBARS)	I / CD-1
CIL	CATCH BASIN INSERT	K / CD-4
IMP	PREFABRICATED INLET PROTECTION	F / CD-2

602	PPE OUTLET PROTECTION (ROAD)	N / D02
609	BALANCE / MANTING SLOPE PROTECTION	G / D01
610	BALANCE / MANTING SLOPE PROTECTION	J / D01
620	STONE CHECK DAM	E / D01
618	STONE FILTER BERM	F / D01
614	WATTLE / ROBE CHANNEL AMPLIFICATION	O / D02
608	WATTLE / ROBE SLOPE AMPLIFICATION	N / D02
619	SEDIMENT TRAP	L / D02

SCS	RAILIZED CONSTRUCTION EXT	B/C/D-I
NMS	WOOD LEVEL SPREADER	C/C/D-I
CMD	CONCRETE WASHOUT	F/C/D-D
SPN	SEEDING POND	G/C/D-D
MUL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TSO	TEMPORARY SEEDING	N/A
PRD	PERMANENT SEEDING	N/A

FOR GENERAL EPSC NOTES AND
CITY OF FRANKLIN EPSC NOTES,
REFER TO PLAN SHEET C-1

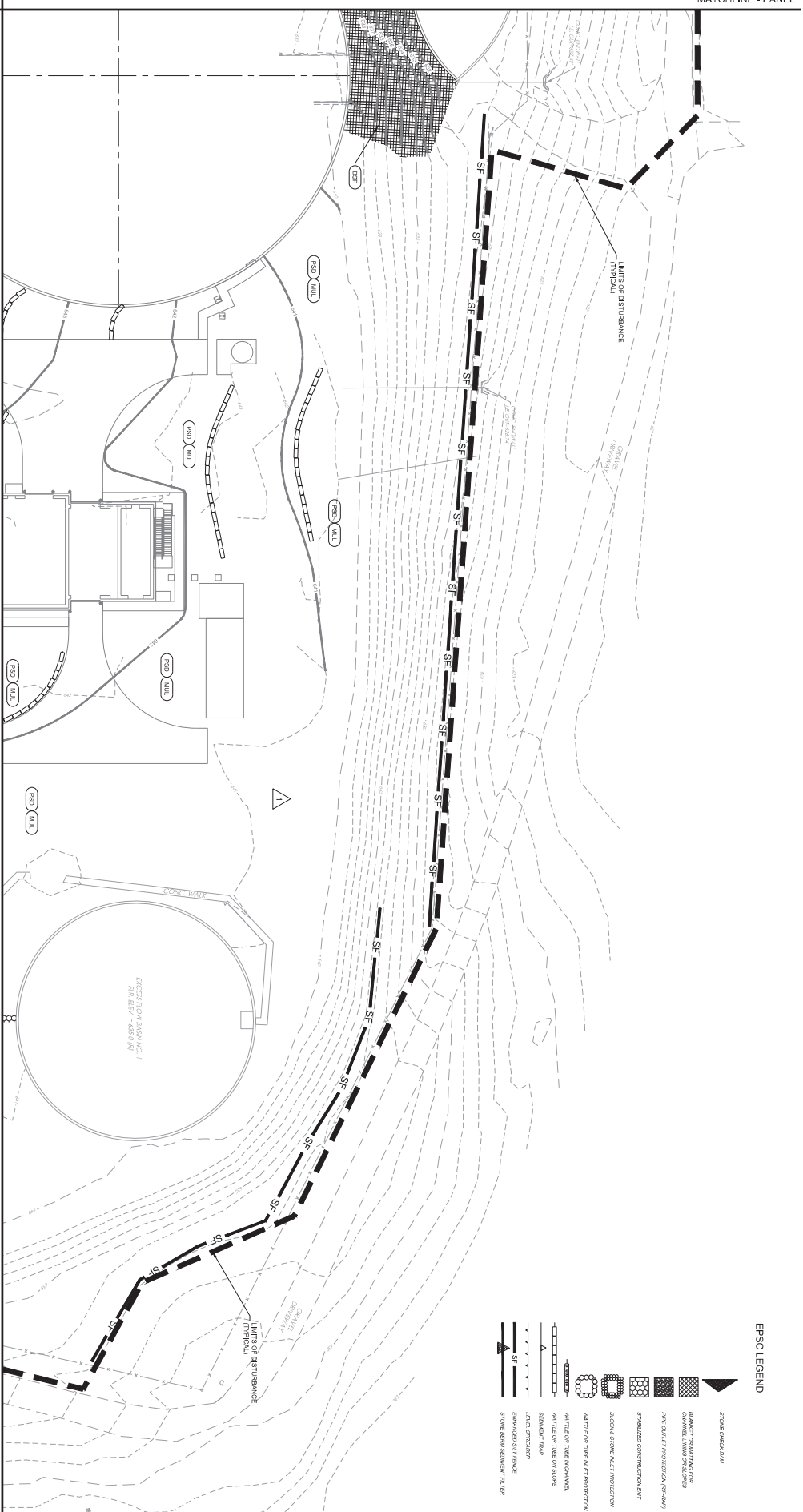


CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY

EROSION PREVENTION & SEDIMENT CONTROL PLAN

PANEL 2 - INTERIM PHASE

NO.	14915-96094-WRF
COE_WRF_CIV	
SHEET NO.	

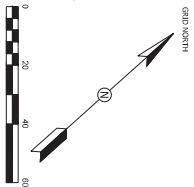


EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DIT # / SHT #
(E9)	ENHANCED SILT FENCE SEDIMENT BARRIER	A / CD-1
(C1P)	CLUNG COMBINATION INLET PROTECTION	T / CD-10
(AP)	ASPA INLET PROTECTION (BLOCK & STONE)	D / CD-1
(WIP)	WASA INLET PROTECTION (STAKED WATTLE BARR)	I / CD-1
(CBI)	CATCH BASIN INSERT	K / CD-1
(PP)	PPFC CULVERT INLET PROTECTION	F / CD-1

609	PIPE JACKET PROTECTION (R/S/4P)	M / 02d
609	BLANKET / MATING SLOPE PROTECTION	G / 02d
609	BLANKET / MATING SLOPE PROTECTION	J / 02d
609	STONE CHECK DAM	E / 02d
609	STONE FILTER BEDDM	R / 02d
609	WATTLE / TUBE CHANNEL APPLICATION	O / 02d
609	WATTLE / TUBE SLOPE APPLICATION	N / 02d
609	SEMENT TRAP	L / 02d

SC2	RAILIZED CONSTRUCTION EXT	B/C0/4
NAS	WOOD LEVER SPREADER	C/C0/4
CNO	CONCRETE WASH/OUT	S/C0/9
SP0	SEEDMENT POND	Q/C0/9
MUL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TR0	TEMPORARY SEEDING	N/A
TR00	PERMANENT SEEDING	N/A

FOR GENERAL EPSC NOTES AND
CITY OF FRANKLIN EPSC NOTES,
REFER TO PLAN SHEET C-1



MATCHLINE - PANEL A

EROSION PREVENTION & SEDIMENT CONTROL PLAN
PANEL 2 - FINAL PHASE

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COF CONTRACT NO. 2017-0264

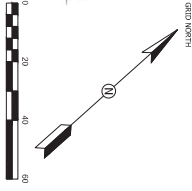
PROJECT NO.	14915-98594-WR
FILE NAME:	CoF_WRF_Civ

NO.	DATE	BY	CHKD	REVISIONS
1	1/14	RM		CONFORMED DRAWING
2	1/14	RM		REVISION FOR BID CHANGES
3	1/14	RM		REVISIONS

DESIGNED BY	TU
DRAWN BY	RM
CHECKED BY	RM
APPROVED BY	T. HARRIS
DATE	APRIL 2018

CDM Smith
CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COP CONTRACT NO. 2017-0264

EROSION PREVENTION & SEDIMENT CONTROL PLAN	PROJECT NO. 17-0264
PANEL 3 - INITIAL PHASE	DATE: 08/01/2018
C-40A	DRAWING

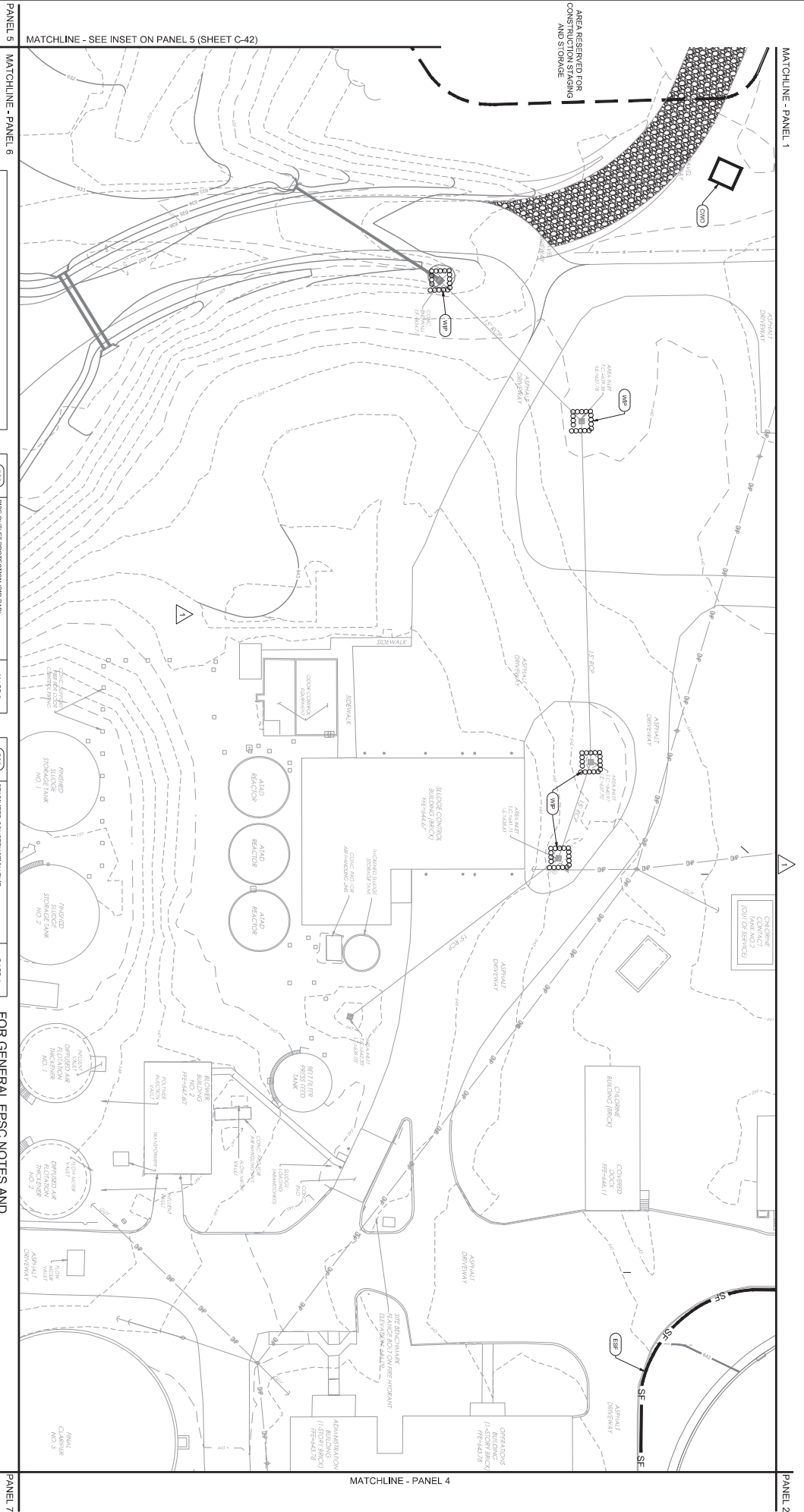


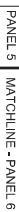
CODE	DESCRIPTION	DTL # / SHT #
ESP	ENHANCED SILT FENCE / SEDIMENT BARRIER	A / CD-1
CP	CURB (COMBINATION) INLET PROTECTION	T / CD-9
AP	AREA INLET PROTECTION (BLOCK & STONE)	D / CD-1
WIP	WATER INLET PROTECTION (STAKED WATER LINES)	D / CD-1
CB	CATCH BASIN INLET	K / CD-1
PI	PIPE CATCHER INLET PROTECTION	F / CD-1

CODE	DESCRIPTION	DTL # / SHT #
PO	PIPE OUTLET PROTECTION (BUSH)	W / CD-2
BL	BLANKET / MATTING / SLOPE PROTECTION	G / CD-1
CD	CONCRETE CHECK DAM	J / CD-1
ST	STONE CHECK DAM	E / CD-1
SR	STONE RILL / TIE BERM	R / CD-2
WA	WATTLE / TIE CHANNEL APPLICATION	N / CD-2
WD	WATTLE / TIE SLOPE APPLICATION	O / CD-2
SE	SEEDMENT POND	L / CD-2

CODE	DESCRIPTION	DTL # / SHT #
SE	STABILIZED CONSTRUCTION EXIT	B / CD-1
MS	WOOD LEVEL SPREADER	C / CD-1
GD	CONCRETE GROUT	S / CD-3
EP	SEDIMENT POND	O / CD-3
ML	STRAW MULCH @ 3 TONS PER ACRE	NA
TD	TEMPORARY SEEDING	NA
PR	PERMANENT SEEDING	NA

FOR GENERAL EPSC NOTES AND
REFER TO PLAN SHEET C-1





SECE	PAVILION CONSTRUCTION EXIT	B/COP-1
WAS	WOOD EVENT SPREADER	C/COP-1
CONO	CONCRETE WASH-OUT	S/COP-6
SPIN	SEDIMENT POND	O/COP-6
MUL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TSD	TEMPORARY SEEDING	N/A
TRSD	PERMANENT SEEDING	N/A

NO.	DATE	BY	CHKD	REVISIONS
1	04/11/18	TH	RM	REVISION FOR BID CHANGES
2	04/11/18	TH	RM	REVISION FOR BID CHANGES
3	04/11/18	TH	RM	REVISIONS

DESIGNED BY: **CDM Smith**
DRAWN BY: **CDM Smith**
CHECKED BY: **CDM Smith**
APPROVED BY: **CDM Smith**
DATE: **APRIL 2018**

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COP CONTRACT NO. 2017-0264

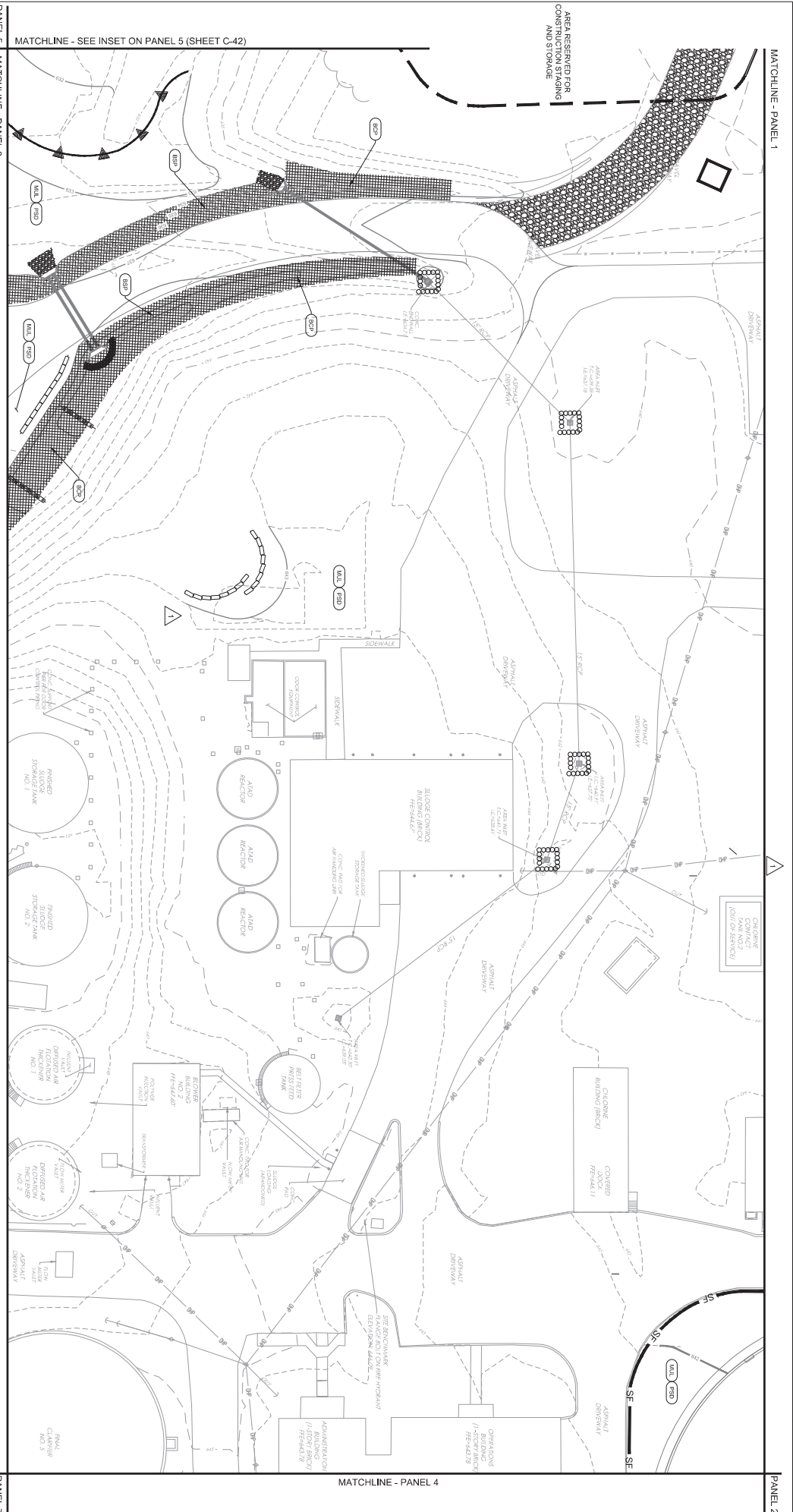
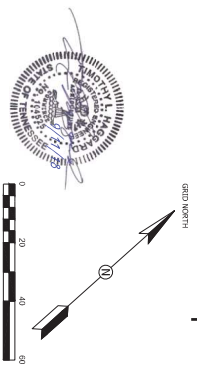
EROSION PREVENTION & SEDIMENT CONTROL PLAN
PANEL 3 - FINAL PHASE
C-40C
CONFORMED DRAWING - AUGUST 2018

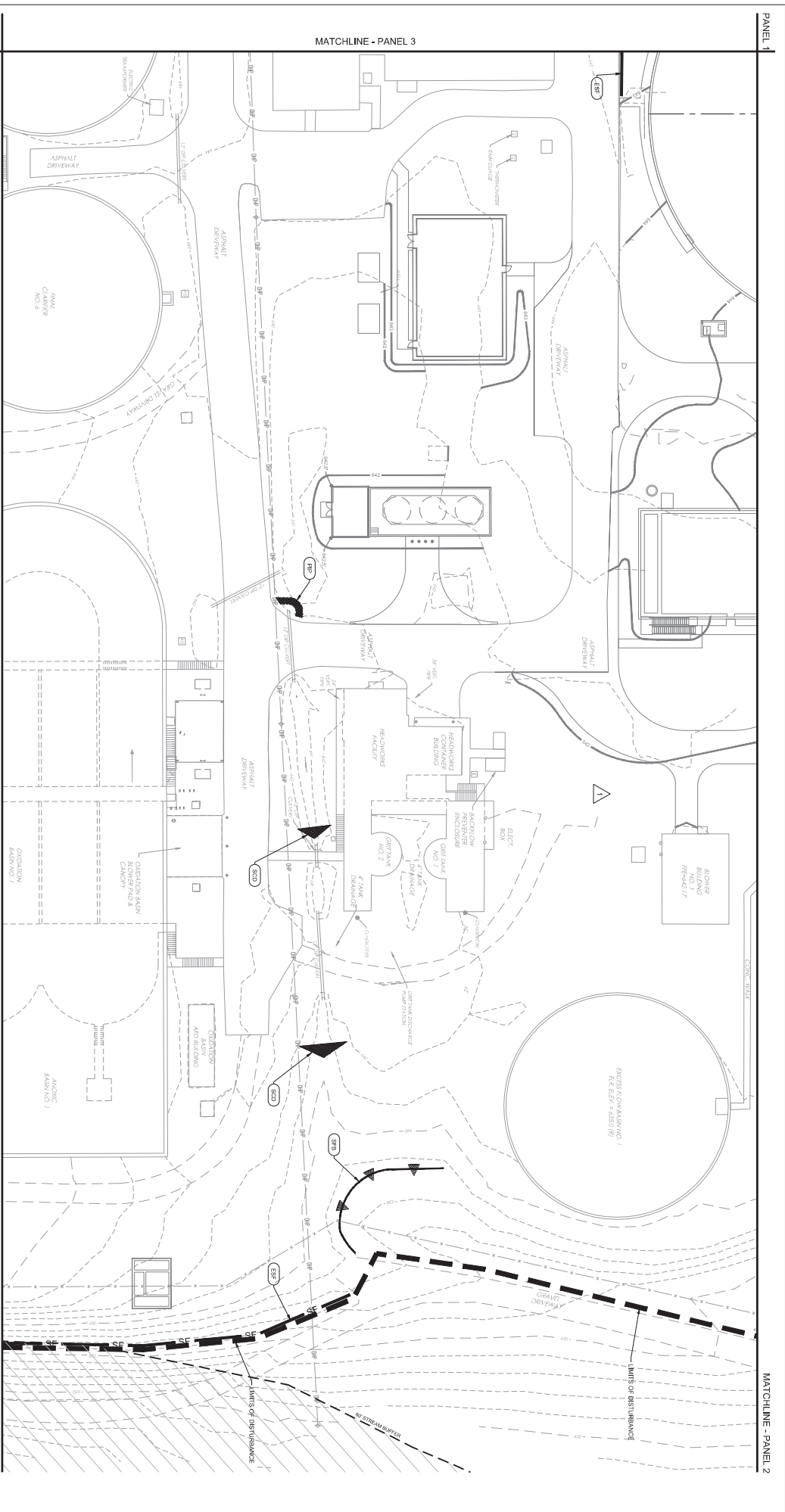
EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DTL # / SHT #
ESP	ENHANCED SET FENCE SEDIMENT BARRIER	A / CD-1
CP	CURB (COMBINATION) INLET PROTECTION	T / CD-3
AP	AREA INLET PROTECTION (BLOCK & STONE)	D / CD-4
WIP	WATER INLET PROTECTION (STAKED WATER LIME)	I / CD-1
CB	CATCH BASIN INLET	K / CD-1
PP	PIPE CATCHER INLET PROTECTION	F / CD-1

CODE	DESCRIPTION	DTL # / SHT #
POD	PIPE OUTLET PROTECTION (RIP-RAP)	W / CD-2
BLP	BLANKET / MATTING SOPE PROTECTION	G / CD-1
SCD	STONE CHECK DAM	J / CD-1
SPB	STONE PILE BERM	R / CD-4
WCA	WATTLE / TUBE CHANNEL APPLICATION	O / CD-2
WTP	WATTLE / TUBE SLOPE APPLICATION	N / CD-2
SPD	SEDIMENT POND	L / CD-2

CODE	DESCRIPTION	DTL # / SHT #
SES	STABILIZED CONSTRUCTION EXIT	B / CD-1
WLS	WOOD LEVEL SPREADER	C / CD-1
GRD	CONCRETE WASHOUT	S / CD-3
EPD	SEDIMENT POND	O / CD-3
MLL	STRAW MULCH @ 3 TONS PER ACRE	NA
TBD	TEMPORARY SEEDING	NA
PRD	PERMANENT SEEDING	NA

FOR GENERAL EPSC NOTES AND
CITY OF FRANKLIN EPSC NOTES,
REFER TO PLANS SHEET C-1



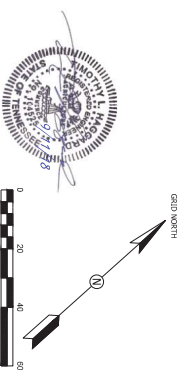


EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DIT #, SHT #
ESP	ENHANCED SILT FENCE SEDIMENT BARRIER	A / CD-4
CP	CULB COMBINATION INLET PROTECTION	T / CD-10
AP	AREA INLET PROTECTION (ALCOCK & TOWNE)	D / CD-4
WP	WATER INLET PROTECTION (STAKED WATER FENCE)	I / CD-4
CB	CATCH BASIN INSERT	K / CD-4
PP	PPILE CULVERT INLET PROTECTION	F / CD-4

POP	PIPE OUTLET PROTECTION (PPAP)	M/CD-2
ESP	BLANKET MATTING SCORE PROTECTION	G/CD-1
CDP	BLANKET MATTING CHANNEL PROTECTION	F/CD-1
SCD	STONE CHECK DAM	E/CD-1
FRB	STONE FILTER BERM	R/CD-49
WCA	WATTLE/TUBE CHANNEL APPLICATION	O/CD-2
WMA	WATTLE/TUBE SLOPE APPLICATION	N/CD-2
STP	SEDIMENT TRAP	L/CD-2

SC2	STABILIZED CONSTRUCTION EXIT	B / CD-1
WAS	WOOD LEVEL SPREADER	C / CD-1
CONC	CONCRETE WASHOUT	S / CD-9
SPRD	SEMENTED POND	Q / CD-9
MUL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TRD	TEMPORARY SEEDING	N/A
TRSD	PERMANENT SEEDING	N/A

FOR GENERAL EPSC NOTES AND
CITY OF FRANKLIN EPSC NOTES,
REFER TO PLAN SHEET C-1



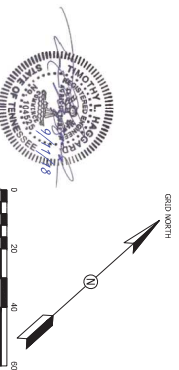
EROSION PREVENTION & SEDIMENT CONTROL PLAN

PANEL 4 - INITIAL PHASE

WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
CDE CONTRACT NO. 2017-0264

C-41A

C-41A



SCA	PAVILIZED CONSTRUCTION EXIT	B / C/D-I
MA-5	WOOD LEVER SPRINKLER	C / C/D-I
CMD	CONCRETE WASH-OUT	S / C/D-I
SPN	SEMENT POND	O / C/D-I
MUL	STRAW MULCH @ 5 TONS PER ACRE	N/A
TSD	TEMPORARY SEEDING	N/A
PRD	PERMANENT SEEDING	N/A

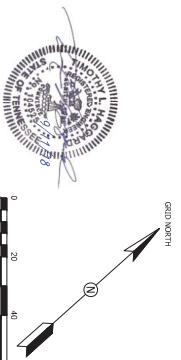
CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY

EROSION PREVENTION & SEDIMENT CONTROL PLAN

PANEL 4 - INTERIM PHASE

MODIFICATIONS AND EXPANSION PROJECT
COE CONTRACT NO. 2017 0364

E: COE_WRF_CIVIL



SCA	PAVILIZED CONSTRUCTION EXIT	B / C/D-I
MA-5	WOOD LEVER SPRINKLER	C / C/D-I
CMD	CONCRETE WASH-OUT	S / C/D-I
SPN	SEMENT POND	O / C/D-I
MUL	STRAW MULCH @ 5 TONS PER ACRE	N/A
TSD	TEMPORARY SEEDING	N/A
PRD	PERMANENT SEEDING	N/A

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY

EROSION PREVENTION & SEDIMENT CONTROL PLAN

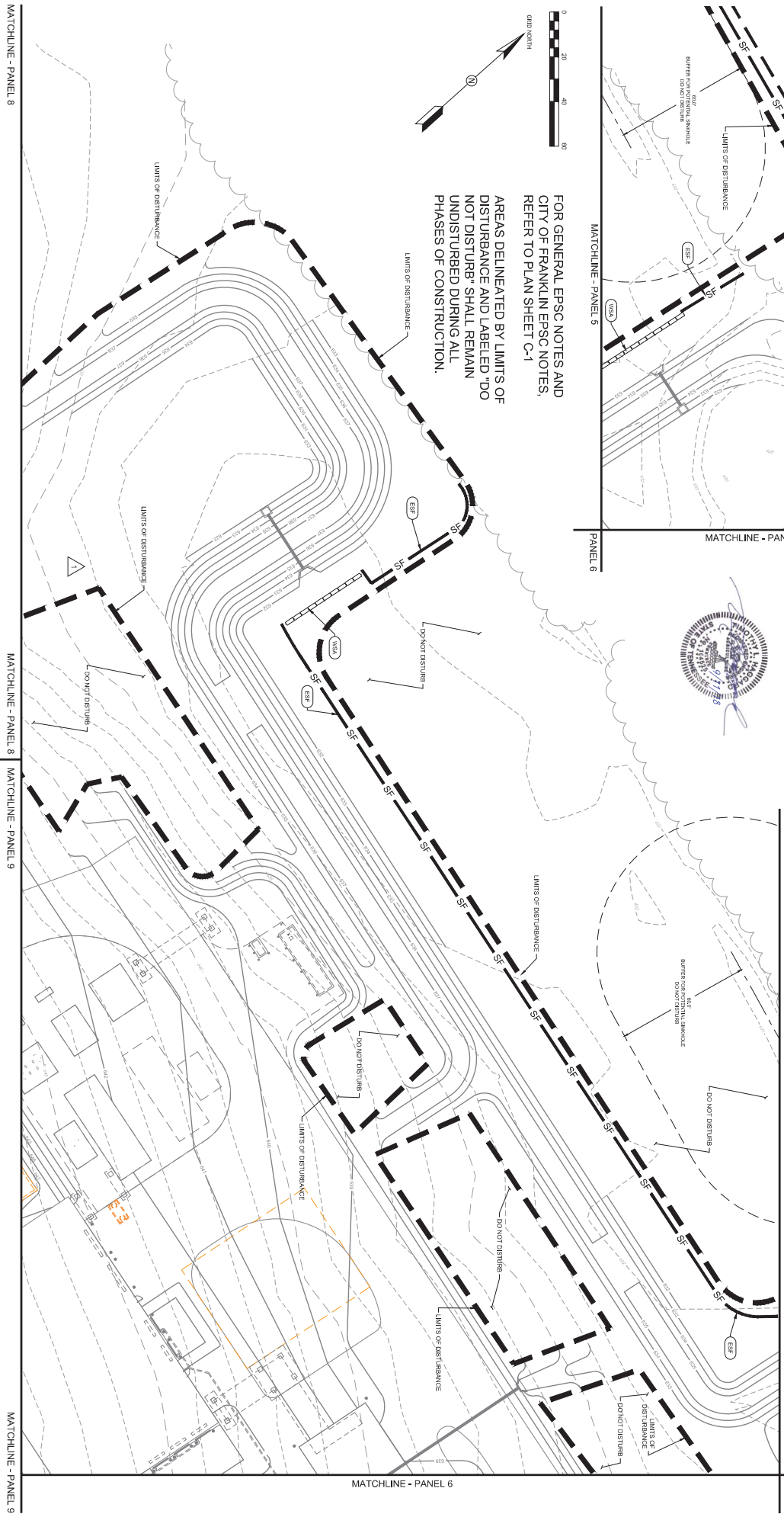
PANEL 4 - FINAL PHASE

PROJECT NO.	1987-1-00024-1000
FILE NAME:	Cof_WRF_Civil
SHEET NO.	C-41C

DESIGNED BY: TLU
DRAWN BY: JBN
CHECKED BY: JBN
APPROVED BY: T. HARRIS
DATE: APRIL 2018

CDM Smith
CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COP CONTRACT NO. 2017-0264

EROSION PREVENTION & SEDIMENT CONTROL PLAN
PANEL 5 - INITIAL PHASE
C-42A



EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DTL # / SHT #
ESF	ADVANCED SILT FENCE / SEDIMENT BARRIER	A / CD-1
CSF	CURB COMBINATION INLET PROTECTION	T / CD-6
WIP	WATER INLET PROTECTION (BLOCK & STONE)	D / CD-1
WAP	WATER INLET PROTECTION (STWED WATER TUBES)	I / CD-1
CB	CATCH BASIN INLET	K / CD-1
PI	PIPE CULVERT INLET PROTECTION	F / CD-1
CSF	PIPE CULVERT PROTECTION (REPAIR)	M / CD-2
BSF	BLANKET / MATING SLOPE PROTECTION	G / CD-1
CSF	BLANKET / MATING CHANNEL PROTECTION	J / CD-1
CSF	STONE CHECK DAM	E / CD-1
CSF	STONE FILTER BERM	R / CD-4
WAF	WATTLE / FIBER CHANNEL APPLICATION	O / CD-2
WAF	WATTLE / FIBER BLOOM APPLICATION	N / CD-2
STP	SEDIMENT TRAP	L / CD-2
CSF	STABILIZED CONSTRUCTION ERT	B / CD-1
WLS	WOOD LEVEL SPREADER	C / CD-1
CSF	CONCRETE WASHOUT	S / CD-9
CSF	SEDIMENT POND	O / CD-8
WLS	STRAW MULCH @ 3 TONS PER ACRE	N/A
TRD	TEMPORARY SEEDING	N/A
PRD	PERMANENT SEEDING	N/A

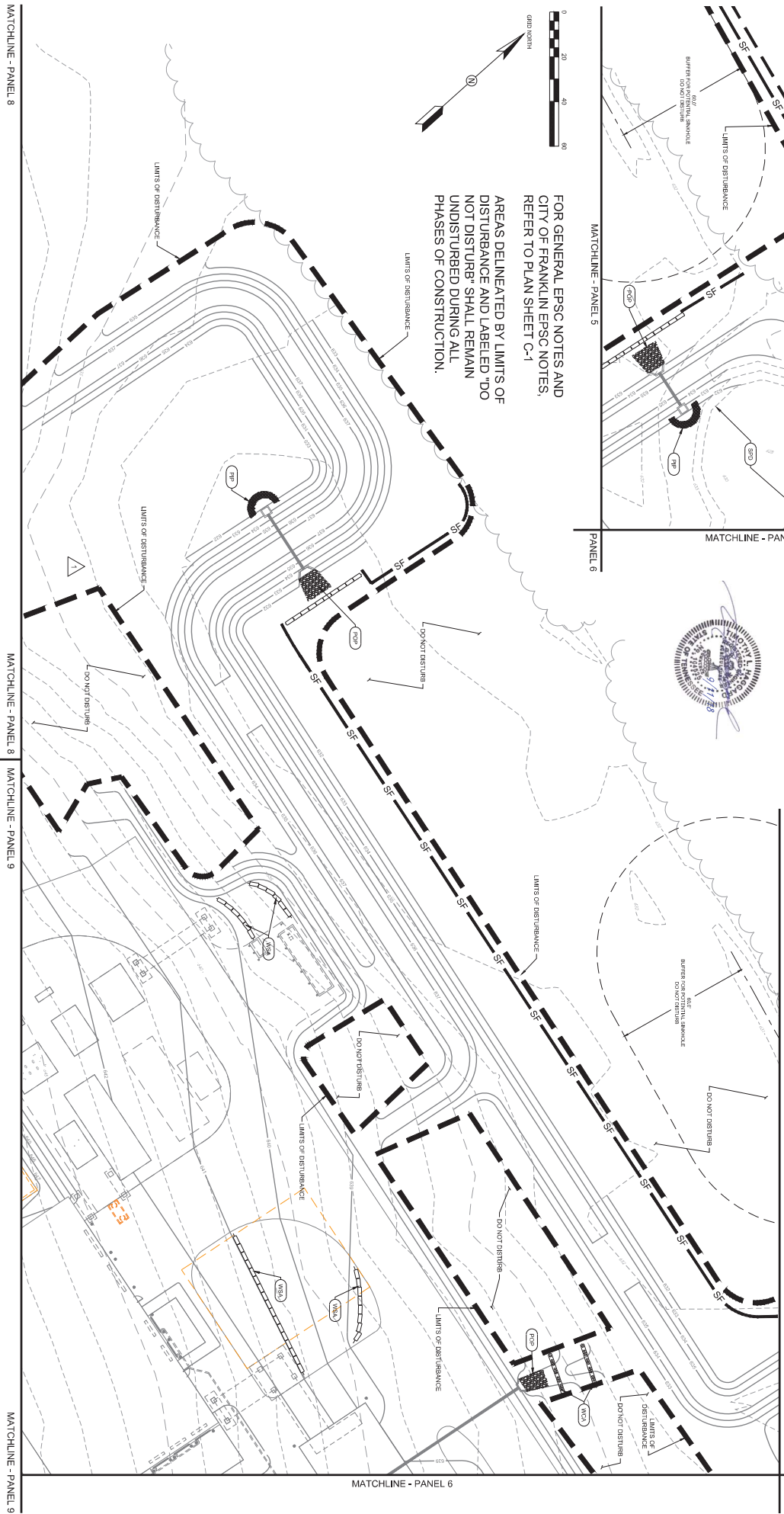
MATCHLINE - SEE INSET LEFT

NO.	DATE	DOWN	CHG	REVISIONS
1	04/18	REV		CONFORMED DRAWING
2	04/18	REV		REDESIGNED FOR NEW CHANGES
3	04/18	REV		REVISIONS

DESIGNED BY	TLL
DRAWN BY	BRH
CHECKED BY	BRH
APPROVED BY	T. HARRIS
DATE	APRIL 2018

CDM Smith	CDM Smith
1418 BIRCH STREET NASHVILLE, TN 37203 TEL: 615.332.3181 WWW.CDM-SMITH.COM	1418 BIRCH STREET NASHVILLE, TN 37203 TEL: 615.332.3181 WWW.CDM-SMITH.COM

CITY OF FRANKLIN, TENNESSEE WATER RECLAMATION FACILITY MODIFICATIONS AND EXPANSION PROJECT COP CONTRACT NO. 2017-0264	EROSION PREVENTION & SEDIMENT CONTROL PLAN PANEL 5 - INTERIM PHASE C-42B
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CODE	DESCRIPTION	DTL # / SHT #
ESP	ADVANCED SILT FENCE SEDIMENT BARRIER	A / CD-1
CP	CURB COMBINATION INLET PROTECTION	T / CD-6
WP	AREA INLET PROTECTION (BLOCK & STONE)	D / CD-1
WP	AREA INLET PROTECTION (STWED WALL/TURBINE)	I / CD-1
CB	CATCH BASIN INLET	K / CD-1
WP	PPE CULVERT INLET PROTECTION	F / CD-1

CODE	DESCRIPTION	M / CD-2
SP	PIPE OUTLET PROTECTION (PIPE-ARCH)	M / CD-2
SP	BLANKET / MATING SLOPE PROTECTION	G / CD-1
SP	BLANKET / MATING CHANNEL PROTECTION	J / CD-1
SP	STONE CHECK DAM	E / CD-1
SP	STONE FILTER BERM	R / CD-4
WP	WATTLE / FIBER CHANNEL APPLICATION	O / CD-2
WP	WATTLE / FIBER BERM APPLICATION	N / CD-2
SP	SEDIMENT TRAP	L / CD-2

CODE	DESCRIPTION	B / CD-1
SP	STABILIZED CONSTRUCTION ERT	C / CD-1
SP	WOOD LEVEL SPREADER	S / CD-9
SP	CONCRETE WASHOUT	O / CD-9
SP	SEDIMENT POND	N / CD-9
SP	STRAW MULCH @ 3 TONS PER ACRE	N / CD-9
SP	TEMPORARY SEEDING	N / CD-9
SP	PERMANENT SEEDING	N / CD-9

MATCHLINE - SEE INSET LEFT

PANEL 3

MATCHLINE - PANEL 6

MATCHLINE - PANEL 9

MATCHLINE - PANEL 8

MATCHLINE - PANEL 8

MATCHLINE - PANEL 5

PANEL 6

MATCHLINE - PANEL 3

FOR GENERAL EPSC NOTES AND CITY OF FRANKLIN EPSC NOTES, REFER TO PLAN SHEET C-1

AREAS DELINEATED BY LIMITS OF DISTURBANCE AND LABELED "DO NOT DISTURB" SHALL REMAIN UNDISTURBED DURING ALL PHASES OF CONSTRUCTION.



SC2	PAVILIZED CONSTRUCTION EXIT	B/COP-1
N/A	WOOD LEVER SPREADER	C/COP-1
CONO	CONCRETE WASHOUT	S/COP-8
SPD	SEDIMENT POND	O/COP-9
N/A	STRAW MULCH @ 3 TONS PER ACRE	N/A
SPD	TEMPORARY SEEDING	N/A
SPD	PERMANENT SEEDING	N/A

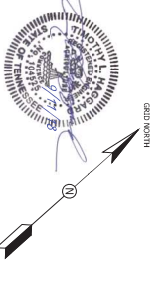
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5	04/11/18	REV	CHNG	REVISIONS
6	04/11/18	REV	CHNG	REVISIONS
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20	04/11/18	REV	CHNG	REVISIONS

CODE	DESCRIPTION	DTL # / SHT #
ESP	ENHANCED SILT FENCE SEDIMENT BARRIER	A / CD-1
QBP	QBP (COMBINATION) INLET PROTECTION	T / CD-10
QIP	AREA INLET PROTECTION (ROCK & STONE)	D / CD-1
QIP	AREA INLET PROTECTION (STYLED WALL/ETHEL)	I / CD-1
QIP	CATCH BASIN INSERT	K / CD-1
QIP	PIPE OVERTOP INLET PROTECTION	F / CD-1

CODE	DESCRIPTION	M / CD-2
QBP	PIPE OUTLET PROTECTION (R&B&B)	M / CD-2
QBP	BLANKET / MATING SLOPE PROTECTION	G / CD-1
QBP	BLANKET / MATING CHANNEL PROTECTION	J / CD-1
QBP	STONE CHECK DAM	E / CD-1
QBP	STONE FILTER RIM	R / CD-4
QBP	MATTIE / TUBE CHANNEL APPLICATION	O / CD-2
QBP	MATTIE / TUBE SLOPE APPLICATION	N / CD-2
QBP	SEGMENT TRAP	L / CD-2

CODE	DESCRIPTION	B / CD-1
QBP	STABILIZED CONSTRUCTION EXIT	B / CD-1
QBP	WOOD L-PILE SPREEDER	C / CD-1
QBP	CONCRETE WASHOUT	S / CD-6
QBP	SEGMENT POND	O / CD-4
QBP	STRAW MULCH @ 3 TONS PER ACRE	N/A
QBP	TEMPORARY SEEDING	N/A
QBP	PERMANENT SEEDING	N/A

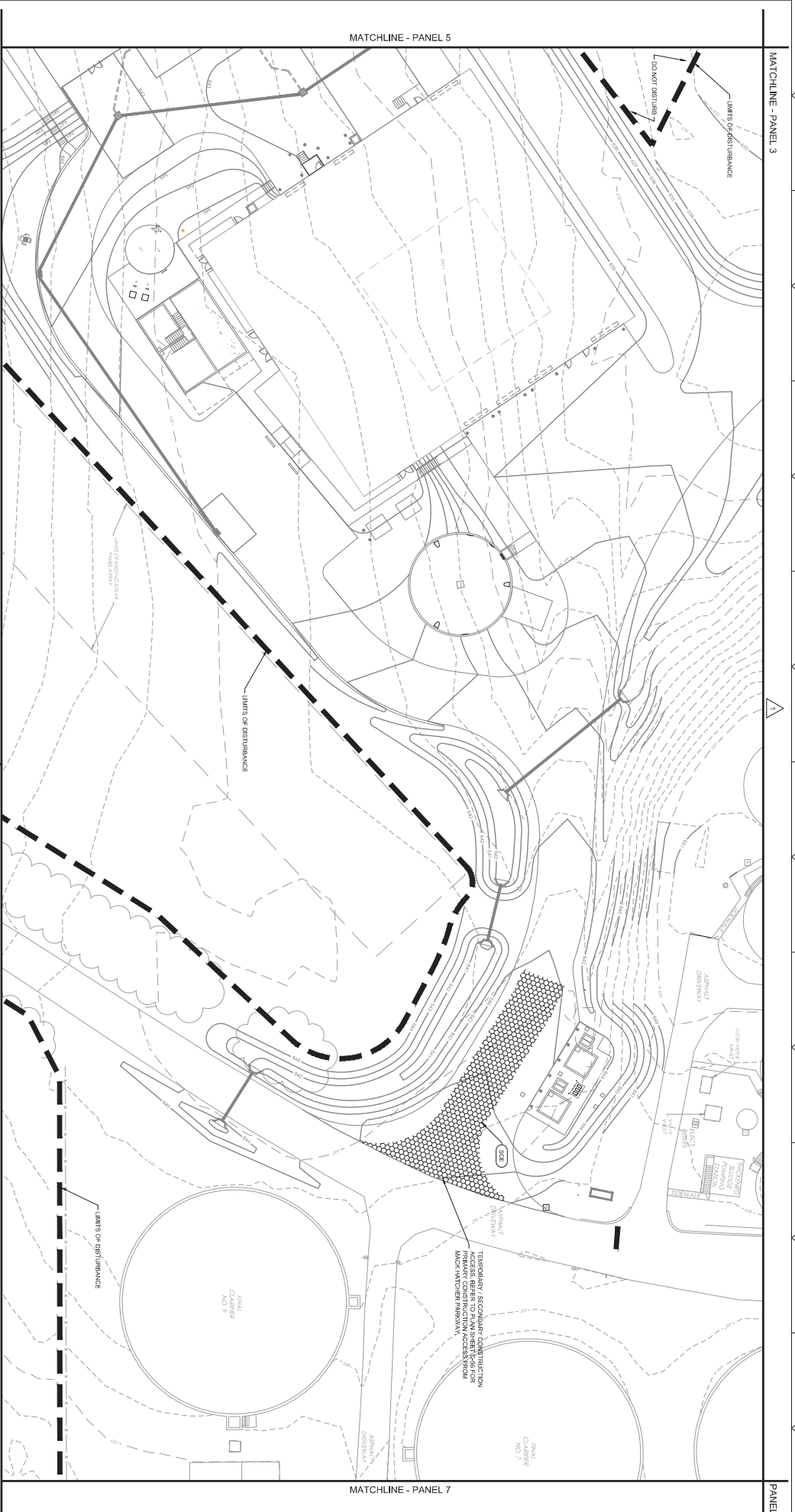
FOR GENERAL EPSC NOTES AND CITY OF FRANKLIN EPSC NOTES, REFER TO PLAN SHEET C-1
AREAS DELINEATED BY LIMITS OF DISTURBANCE AND LABELED "DO NOT DISTURB" SHALL REMAIN UNDISTURBED DURING ALL PHASES OF CONSTRUCTION.



MATCHLINE - PANEL 9

MATCHLINE - PANEL 9

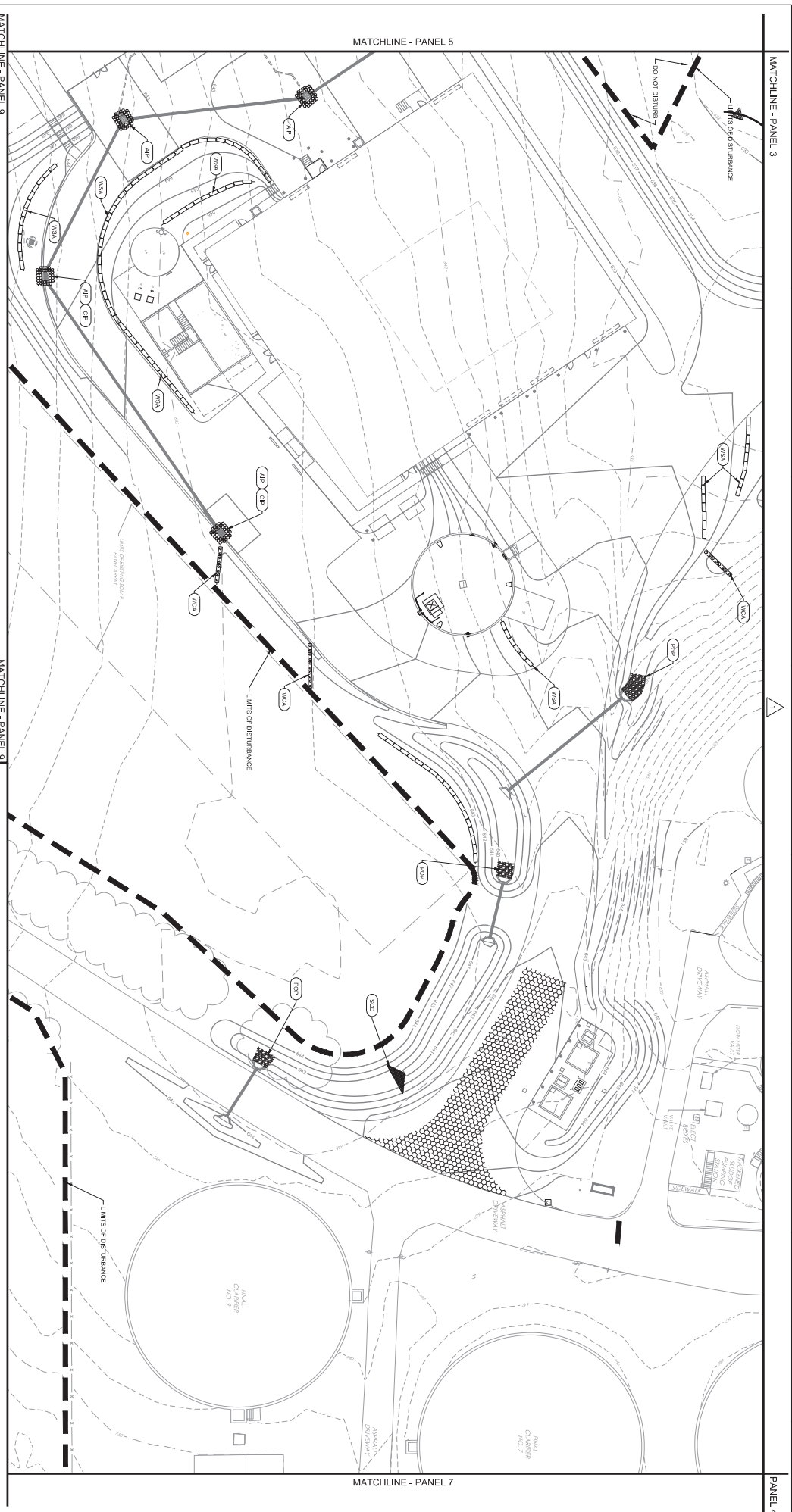
MATCHLINE - PANEL 7



CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COP CONTRACT NO. 2017-0264

EROSION PREVENTION & SEDIMENT CONTROL PLAN
PANEL 6 - INITIAL PHASE

PROJECT NO. C-43A
SHEET NO. C-43A



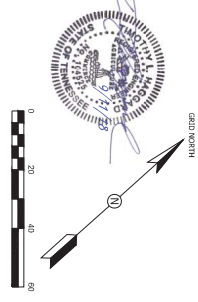
EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DTL # / SFT #
ESP	ENHANCED SILT FENCE/SEDIMENT BARRIER	A / CD-1
QPB	QUBB (COMBINATION) INLET PROTECTION	T / CD-10
WPP	WATER INLET PROTECTION (W/LOG & TROM)	I / CD-1
WPP	AREA INLET PROTECTION (STAKED W/ TIE/ TIE/ B)	I / CD-1
CBH	CATCH BASIN INSET	K / CD-1
WPP	PIPE CULVERT INLET PROTECTION	F / CD-1

POP	FIRE OUTLET PROTECTION (R10407)	M/D02
BSP	BURNER/ MANTLES SCOPE PROTECTION	G/D04
BSP	BURNER/ MANTLING CHANNEL PROTECTION	J/D04
SCD	STONE CHECK DAM	E/D04
SRB	STONE FILTER BEDS	R/D04
WCV	WASTE/ FIBRE CHANNEL APPLICATION	O/D02
WBS	WASTE/ FIBRE SLOPE APPLICATION	N/D02
STP	SEWERTH RAP	L/D02

SRF	STABILIZED CONSTRUCTION EXT	B / CD-1
WLS	WOOD LEVEL SPREADER	C / CD-1
CMD	CONCRETE WASHOUT	S / CD-5
SRF	SEGMENT POND	D / CD-4
NAL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TSO	TEMPORARY SEEDING	N/A
PRD	PERMANENT SEEDING	N/A

FOR GENERAL EPSC NOTES AND CITY OF FRANKLIN EPSC NOTES, REFER TO PLAN SHEET C-1

AREAS DELINEATED BY LIMITS OF DISTURBANCE AND LABELED "DO NOT DISTURB" SHALL REMAIN UNDISTURBED DURING ALL PHASES OF CONSTRUCTION.

[illegible]

NO.	DATE	BY	CHKD	DESCRIPTION
1	04/11/2018	TH	CH	CONCEPT DRAWING
2	04/11/2018	TH	CH	REVISION FOR BID CHANGES
3	04/11/2018	TH	CH	REVISIONS

DESIGNED BY: TLU
DRAWN BY: TLU
CHECKED BY: TLU
IN CHARGE: TLU
APPROVED BY: TLU
DATE: APRIL 2018

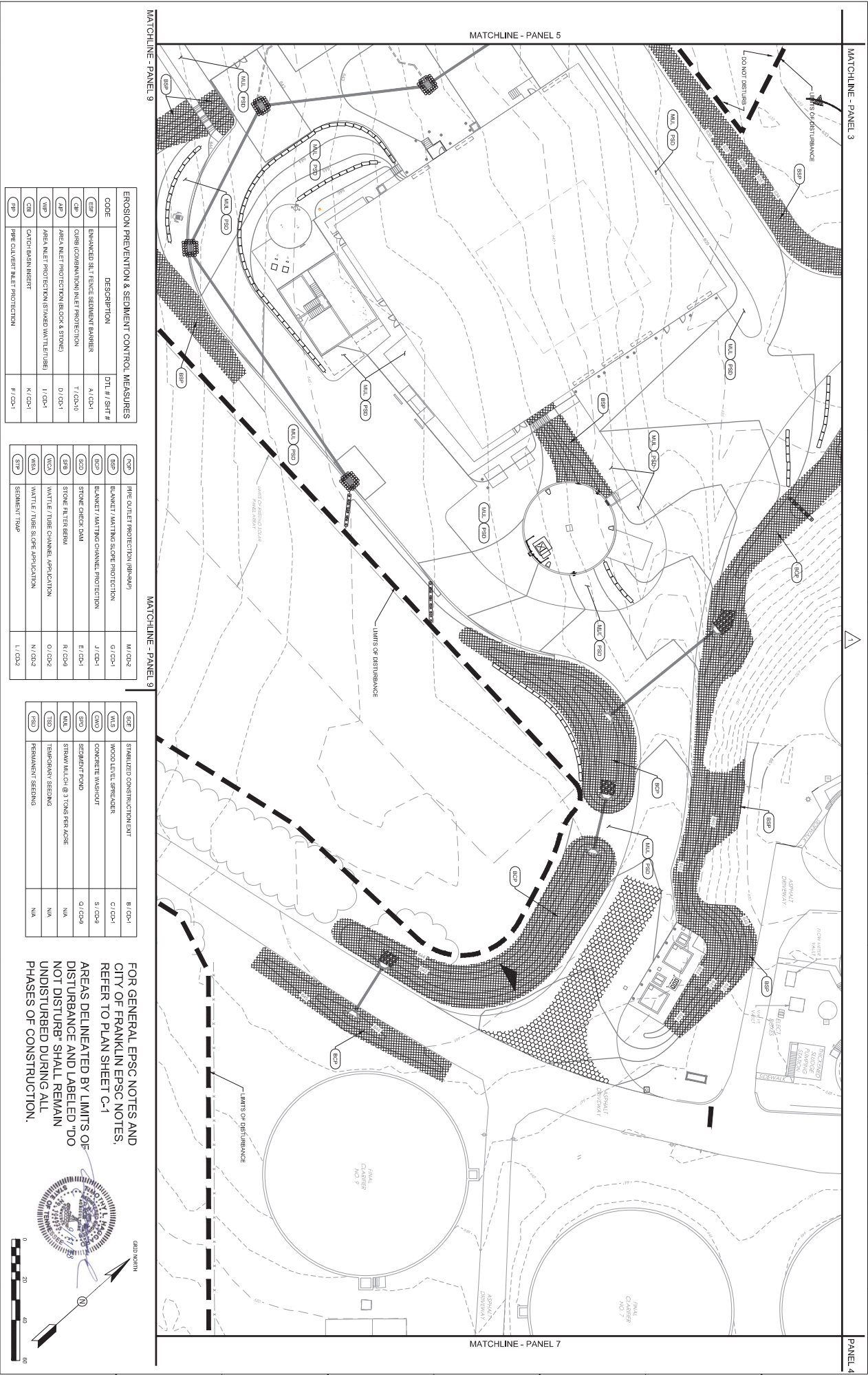
CDM Smith
14100 E. 15th Avenue, Suite 1102
Denver, CO 80232
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Fax: 303.733.2001
www.cdm-smith.com

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CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COP CONTRACT NO. 2017-0264

EROSION PREVENTION & SEDIMENT CONTROL PLAN
PANEL 6 - FINAL PHASE

PROJECT NO. C-43C
SHEET NO. 7



EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DTL # / SHT #
ESP	ENHANCED SILT FENCE SEDIMENT BARRIER	A / CD-1
CPB	CURB (COMBINATION) INLET PROTECTION	T / CD-10
APB	AREA INLET PROTECTION (BLOCK & STONE)	D / CD-1
APB	AREA INLET PROTECTION (STANDARD WATTLE FENCE)	I / CD-1
CBP	CATCH BASIN INSERT	K / CD-1
PIP	PIPE OUTLET INLET PROTECTION	F / CD-1

CODE	DESCRIPTION	DTL # / SHT #
ESP	PIPE OUTLET PROTECTION (R-449)	M / CD-2
ESP	BLANKET / MATTING SLOPE PROTECTION	G / CD-1
ESP	BLANKET / MATTING CHANNEL PROTECTION	J / CD-1
ESP	STONE CHECK DAM	E / CD-1
ESP	STONE FILTER RIM	R / CD-4
ESP	WATTLE / TUBE CHANNEL APPLICATION	O / CD-2
ESP	WATTLE / TUBE SLOPE APPLICATION	N / CD-2
ESP	SEGMENT TRAP	L / CD-2

CODE	DESCRIPTION	DTL # / SHT #
ESP	STABILIZED CONSTRUCTION EXIT	B / CD-1
ESP	WOOD L-PILE SPOILER	C / CD-1
ESP	CONCRETE WASHOUT	S / CD-6
ESP	SEGMENT POND	O / CD-4
ESP	STRAW MULCH @ 3 TONS PER ACRE	N/A
ESP	TEMPORARY SEEDING	N/A
ESP	PERMANENT SEEDING	N/A

FOR GENERAL EPSC NOTES AND CITY OF FRANKLIN EPSC NOTES, REFER TO PLAN SHEET C-1

AREAS DELINEATED BY LIMITS OF DISTURBANCE AND LABELED "DO NOT DISTURB" SHALL REMAIN UNDISTURBED DURING ALL PHASES OF CONSTRUCTION.

0 20 40 60
Feet

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0 20 40 60
Feet

NO.

DATE

DOWN

CHNG

CONFORMED DRAWING

REVISIONS

DESIGNED BY

DRWN BY

CHECKED BY

APPROVED BY

DATE

CDM Smith

CDM Smith

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COP CONTRACT NO. 2017-0264

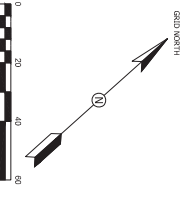
EROSION PREVENTION & SEDIMENT CONTROL PLAN
PANEL 7 - INITIAL PHASE

PROJECT NO.

FILE NAME

SHEET NO.

C-44A

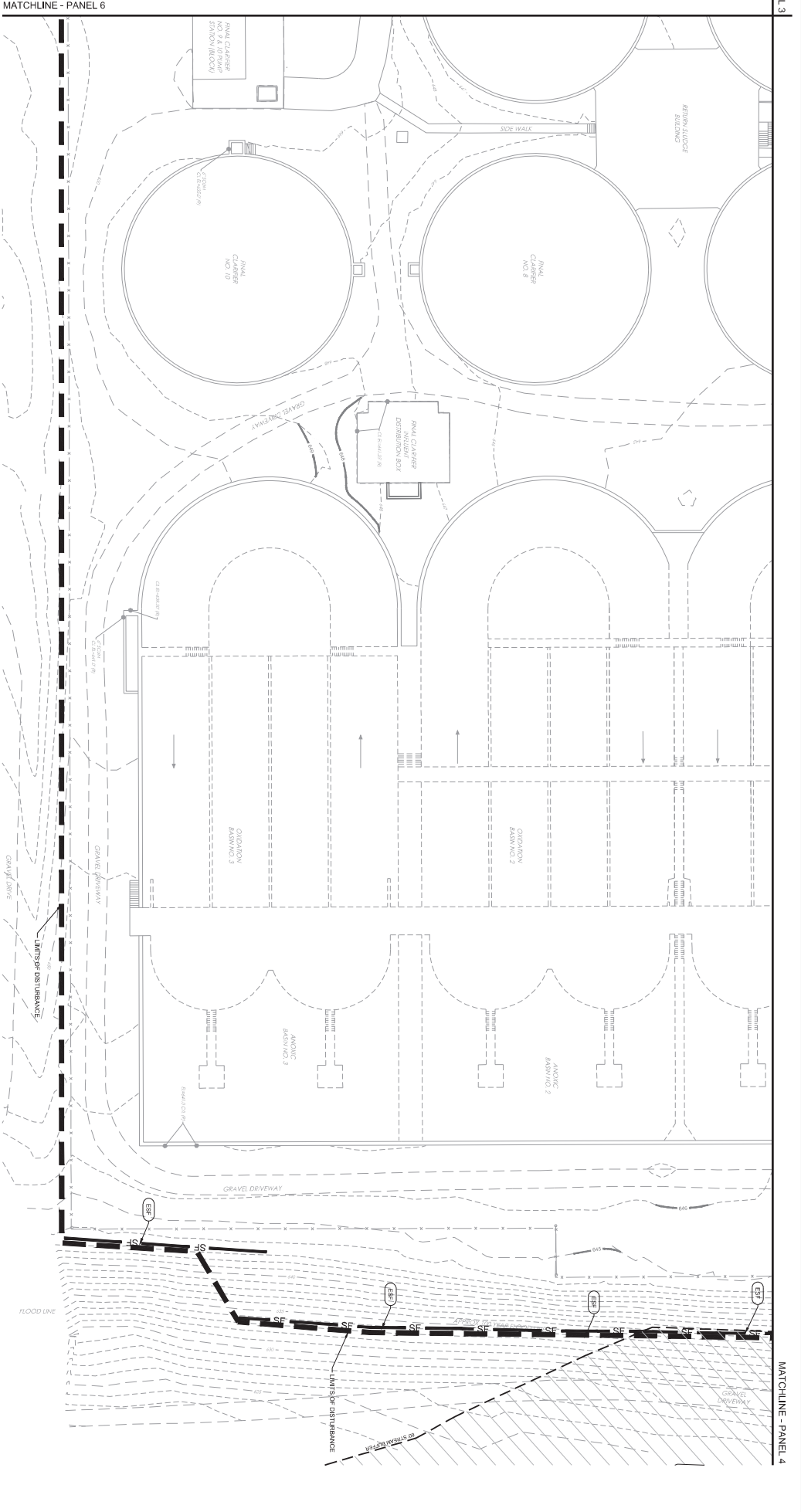


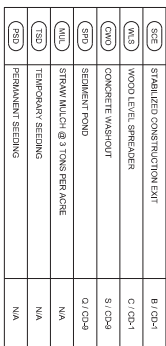
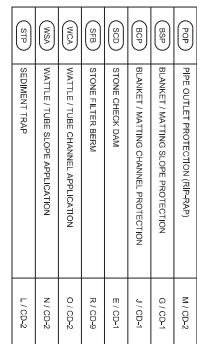
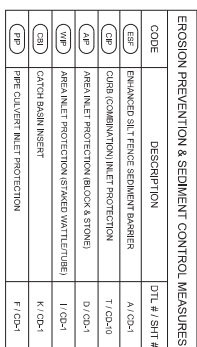
EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DTL # / SFT #
ESP	ENHANCED ALT FENCE SEDIMENT BARRIER	A / CD-1
CDP	CDP (COMBINATION) INLET PROTECTION	T / CD-10
AP	AREA INLET PROTECTION (BLOCK & STONE)	D / CD-1
WIP	WATTLE INLET PROTECTION (BRAND WATTLEBUSH)	I / CD-1
CSB	CATCH BASIN INLET	K / CD-1
PIP	PIPE OUTLET INLET PROTECTION	F / CD-1

ESP	PIPE OUTLET PROTECTION (RIP-RAP)	M / CD-2
ESP	BLANKET / MATING SLOPE PROTECTION	G / CD-1
CDP	BLANKET / MATING CHANNEL PROTECTION	J / CD-1
SCD	STONE CHECK DAM	E / CD-1
SPB	STONE FILTER BERM	R / CD-2
WCA	WATTLE / TUBES CHANNEL APPLICATION	O / CD-2
WCA	WATTLE / TUBES SLOPE APPLICATION	N / CD-2
ETP	SEDIMENT TRAP	L / CD-2

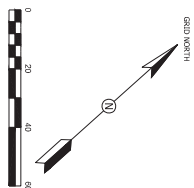
SSC	STABILIZED CONSTRUCTION EXIT	B / CD-1
WLS	WOOL LEVEL SPREADER	C / CD-1
CMW	CONCRETE WASHOUT	S / CD-2
SPD	SEDIMENT POND	D / CD-2
SLM	STRAW MULCH @ 3 TONS PER ACRE	N/A
TSD	TEMPORARY SEEDING	N/A
PSD	PERMANENT SEEDING	N/A

FOR GENERAL EPSC NOTES AND
CITY OF FRANKLIN EPSC NOTES,
REFER TO PLAN SHEET C-1





FOR GENERAL EPSC NOTES AND
CITY OF FRANKLIN EPSC NOTES,
REFER TO PLAN SHEET C-1



PANEL 3

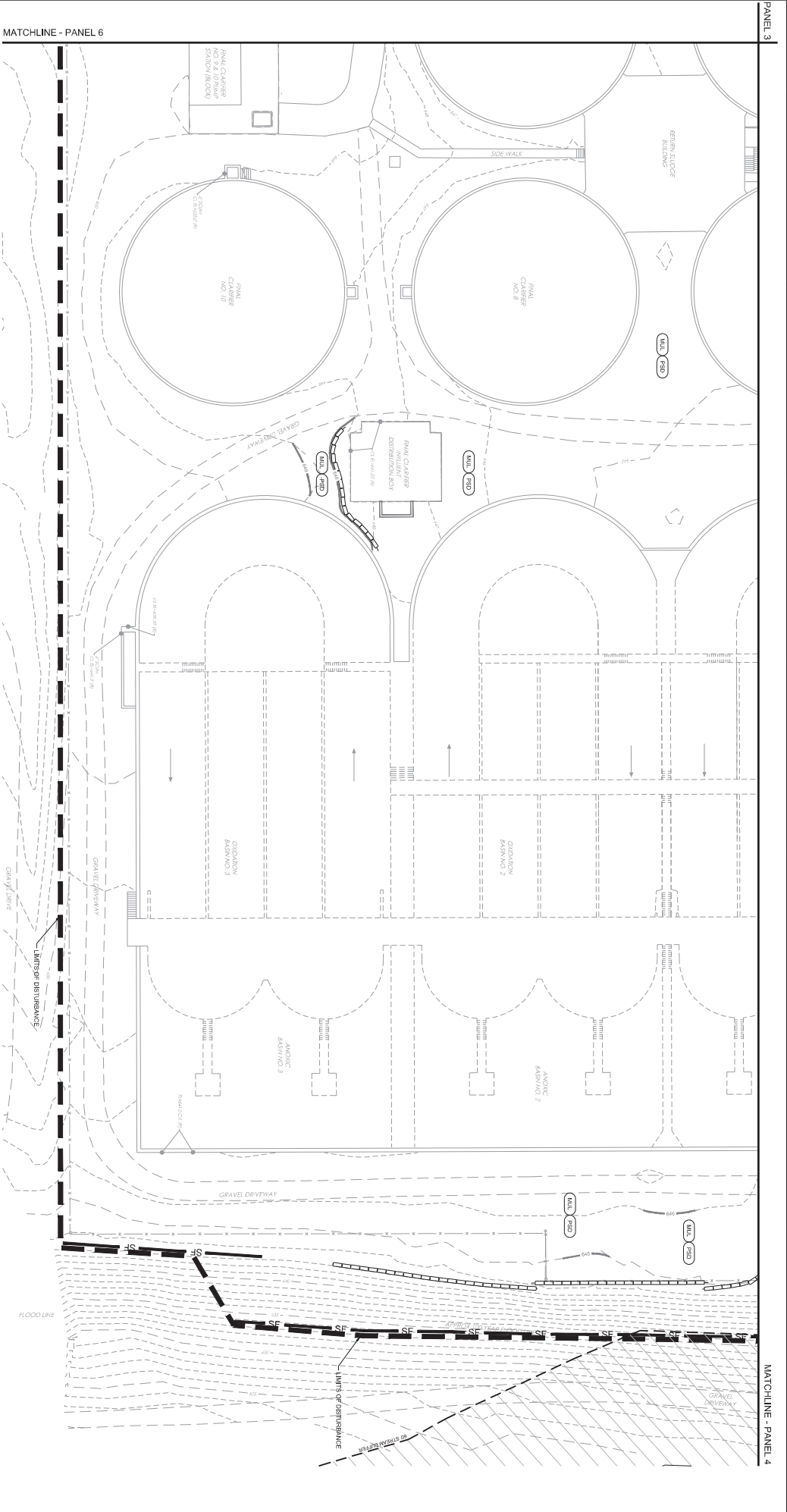
MATCHLINE - PANEL 4

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY

EROSION PREVENTION & SEDIMENT CONTROL PLAN
PANEL 7 - INTERIM PHASE

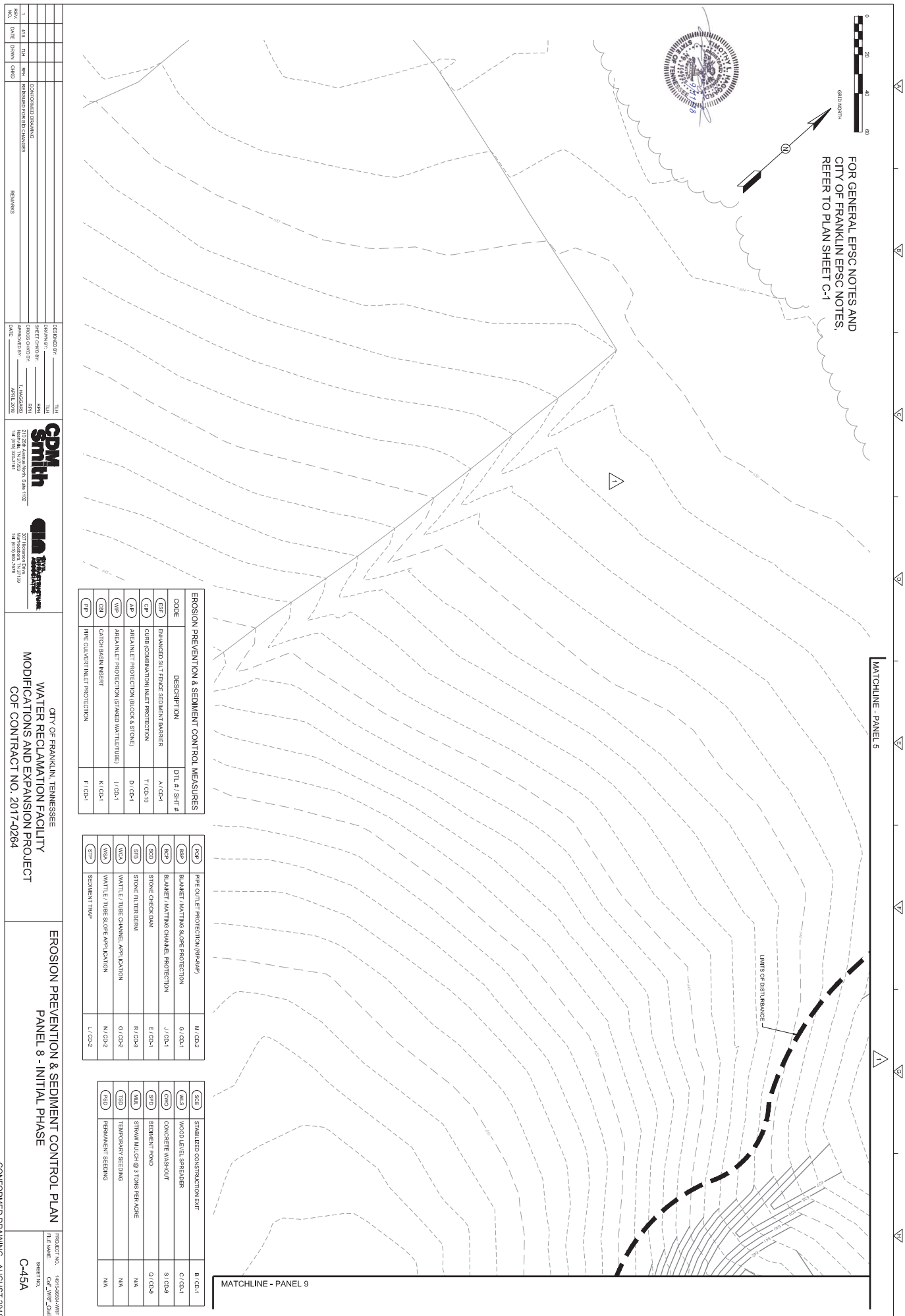
NO.	DATE	DOWN	CHG	REVISIONS	DESIGNED BY	TLU	CDM Smith	CDM Smith	CITY OF FRANKLIN, TENNESSEE WATER RECLAMATION FACILITY MODIFICATIONS AND EXPANSION PROJECT COP CONTRACT NO. 2017-0264	EROSION PREVENTION & SEDIMENT CONTROL PLAN PANEL 7 - FINAL PHASE	PROJECT NO. C-44C SHEET NO. 7
1					DESIGNED BY	TLU					
2					CHECKED BY	BRU					
3					APPROVED BY	T. HANSEN					
4					DATE	APRIL 2018					

EROSION PREVENTION & SEDIMENT CONTROL MEASURES		
CODE	DESCRIPTION	DTL # SHI #
EBP	ENHANCED ALT FENCE SEDIMENT BARRIER	A / CD-1
CDP	CDP (COMBINATION) INLET PROTECTION	T / CD-10
AP	AREA INLET PROTECTION (BLOCK & STONE)	D / CD-1
WIP	WATTLE INLET PROTECTION (BRAND WATTLEBUSH)	I / CD-1
CB	CATCH BASIN INLET	K / CD-1
PIP	PIPE OUTLET INLET PROTECTION	F / CD-1
POP	PIPE OUTLET PROTECTION (PIPE-RAPI)	M / CD-2
BP	BLANKET / MATING SLOPE PROTECTION	G / CD-1
SD	STONE CHECK DAM	J / CD-1
ST	STONE FILTER BERM	E / CD-1
WCA	WATTLE / TUBES CHANNEL APPLICATION	R / CD-2
WCA	WATTLE / TUBES SLOPE APPLICATION	O / CD-2
STP	SEDIMENT TRAP	N / CD-2
SSC	STABILIZED CONSTRUCTION EXIT	B / CD-1
WS	WOOL LEVEL SPREADER	C / CD-1
CM	CONCRETE WASHOUT	S / CD-2
SP	SEDIMENT POND	D / CD-2
ML	STRAW MULCH @ 3 TONS PER ACRE	N/A
TS	TEMPORARY SEEDING	N/A
PS	PERMANENT SEEDING	N/A

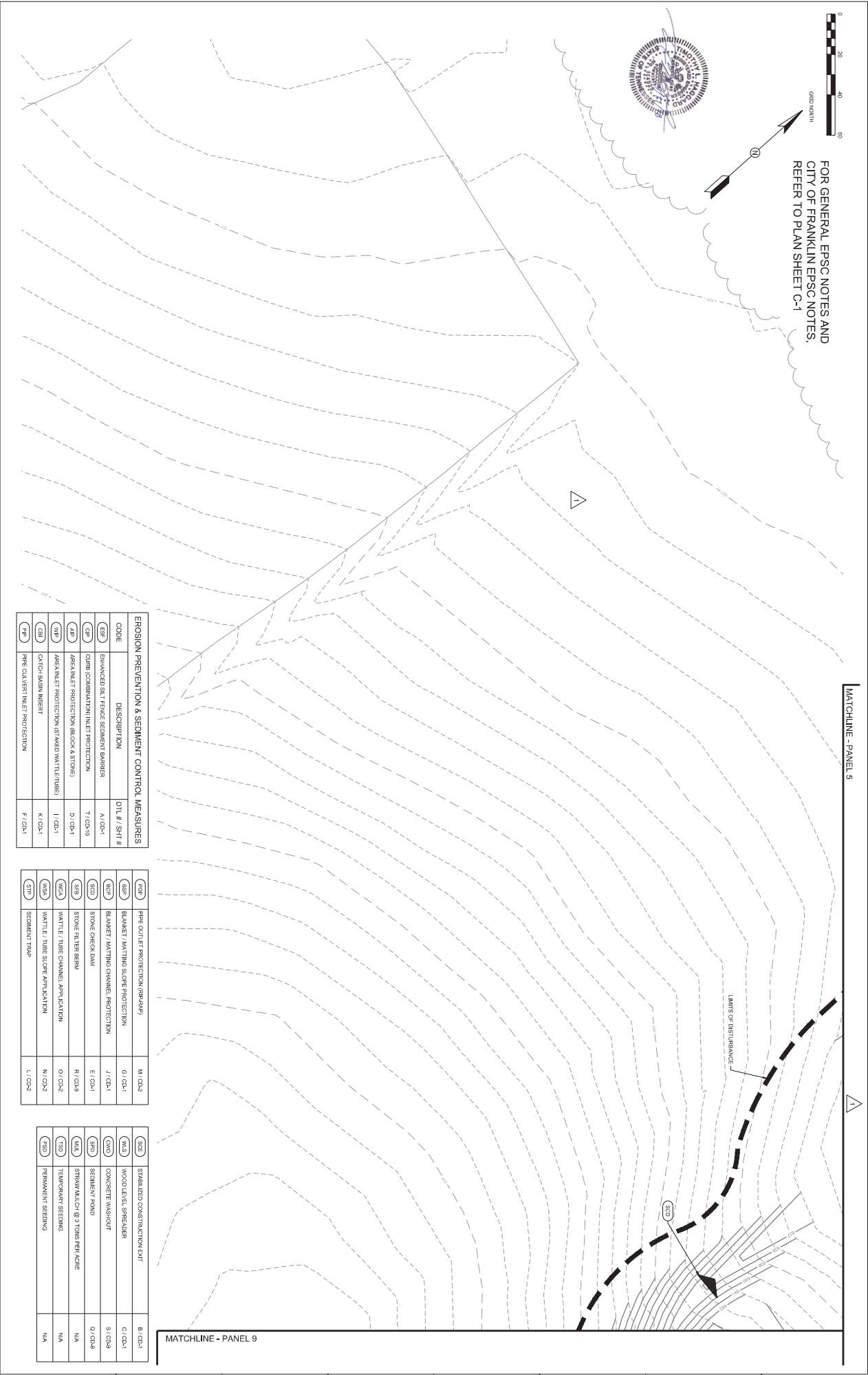


FOR GENERAL EPSC NOTES AND
CITY OF FRANKLIN EPSC NOTES,
REFER TO PLAN SHEET C-1





NO.	DATE	BY	CHKD	REVISIONS
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98	04/11/18	TH	CH	REVISION FOR BID CHANGES
99	04/11/18	TH	CH	REVISION FOR BID CHANGES
100	04/11/18	TH	CH	REVISION FOR BID CHANGES



CODE	DESCRIPTION	DTL #	SHT #
ESP	ENHANCED SLOPE FENCE SEDIMENT BARRIER	A / CD-1	
CDP	CURB COMBINATION INLET PROTECTION	T / CD-10	
ALP	AREA INLET PROTECTION (BLOCK & STONE)	D / CD-1	
WIP	WEDGE INLET PROTECTION (STANDARD WATTLE TUBES)	I / CD-1	
CDP	CATCH BASIN INLET PROTECTION	K / CD-1	
PIP	PINE CULVERT INLET PROTECTION	F / CD-1	

ESP	PIPE CULVERT PROTECTION (B&E&P)	M / CD-2
ESP	BLANKET / WATTLE SLOPE PROTECTION	G / CD-1
ESP	BLANKET / WATTLE CHANNEL PROTECTION	J / CD-1
ESP	STONE CHECK DAM	E / CD-1
ESP	STONE FILTER BEAM	R / CD-3
ESP	WATTLE / TUBE CHANNEL APPLICATION	O / CD-2
ESP	WATTLE / TUBE SLOPE APPLICATION	N / CD-2
ESP	SEDIMENT TRAP	L / CD-2

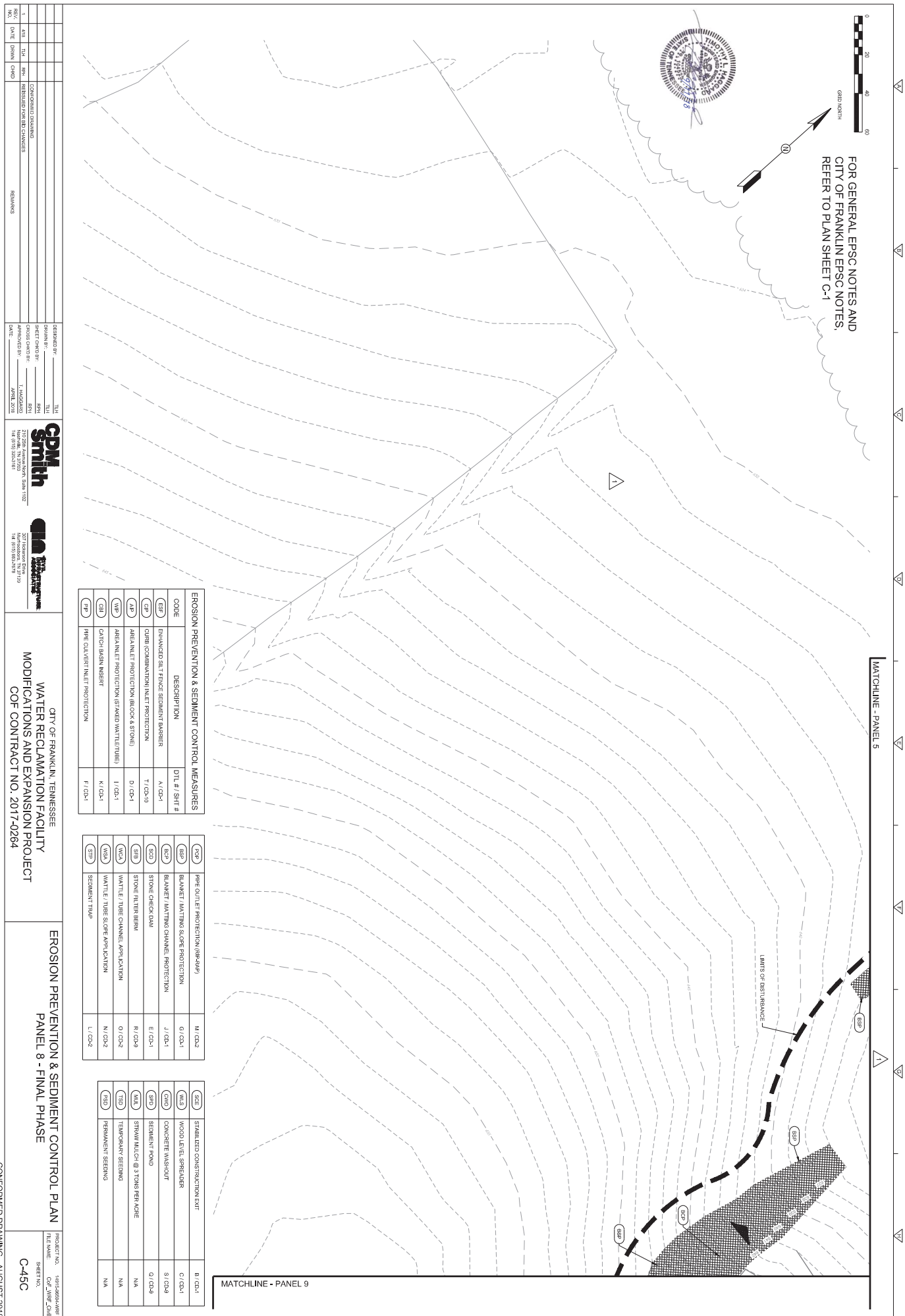
ESP	STABILIZED CONSTRUCTION EXIT	B / CD-1
ESP	WOOD LEVEL SPREADER	C / CD-1
ESP	CONCRETE WASHOUT	S / CD-3
ESP	SEDIMENT POND	Q / CD-3
ESP	STRAW MULCH @ 3 TONS PER ACRE	NA
ESP	TEMPORARY SEEDING	NA
ESP	PERMANENT SEEDING	NA

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COP CONTRACT NO. 2017-0264

EROSION PREVENTION & SEDIMENT CONTROL PLAN
PANEL 8 - INTERIM PHASE

CONFORMED DRAWING - AUGUST 2018

PROJECT NO. 17-0264
SHEET NO. C-45B



NO.	DATE	BY	CHKD	REVISIONS
1	04/18/2018	TH	CH	CONFORMED DRAWING
2	04/18/2018	TH	CH	REVISION FOR PER CHANGES
3	04/18/2018	TH	CH	REVISIONS

CDM Smith

CDM Engineering

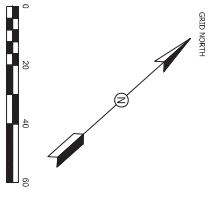
DESIGNED BY: _____
CHECKED BY: _____
APPROVED BY: _____
DATE: _____

CDM Smith
14100 E. 15th Avenue, Suite 1102
Denver, CO 80232
Tel: 303.733.3333
Fax: 303.733.3334

CDM Engineering
2000 Exchange Way
Denver, CO 80202
Tel: 303.733.3333
Fax: 303.733.3334

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY
MODIFICATIONS AND EXPANSION PROJECT
COP CONTRACT NO. 2017-0264

EROSION PREVENTION & SEDIMENT CONTROL PLAN
PANEL 9 - INITIAL PHASE
C-47A



FOR GENERAL EPSC NOTES AND
CITY OF FRANKLIN EPSC NOTES,
REFER TO PLAN SHEET C-1

CODE	DESCRIPTION	DTL # / SHT #
ESP	ENHANCED SET-TO-PLACE SEDIMENT BARRIER	A / CD-1
CIP	CORR CORROSION INLET PROTECTION	T / CD-10
IMP	INLET PROTECTION (BROCK & STONE)	D / CD-1
WIP	WATER INLET PROTECTION (STANDARD WATER TUBES)	I / CD-1
GRIP	GRASS INLET PROTECTION	K / CD-1
PIP	PIPE ALBERT INLET PROTECTION	F / CD-1

ESP	PRE-OUTLET PROTECTION (PRE-OUT)	M / CD-2
ESP	BLANKET / MATING SLOPE PROTECTION	G / CD-1
ESP	BLANKET / MATING CHANNEL PROTECTION	J / CD-1
ESP	STONE CHECK DAM	E / CD-1
ESP	STONE FILTER BERM	R / CD-2
ESP	WATTLE / TUBE CHANNEL APPLICATION	O / CD-2
ESP	WATTLE / TUBE SLOPE APPLICATION	N / CD-2
ESP	SEMENT TRAP	L / CD-2

ESP	STABILIZED CONSTRUCTION EXIT	B / CD-1
ESP	WOOD LEVEL SPREADER	C / CD-1
ESP	CONCRETE WASHOUT	S / CD-1
ESP	SEDIMENT POND	O / CD-2
ESP	STRAW MULCH @ 3 TONS PER ACRE	N/A
ESP	TEMPORARY SEEDING	N/A
ESP	PERMANENT SEEDING	N/A

MATCHLINE - PANEL 8

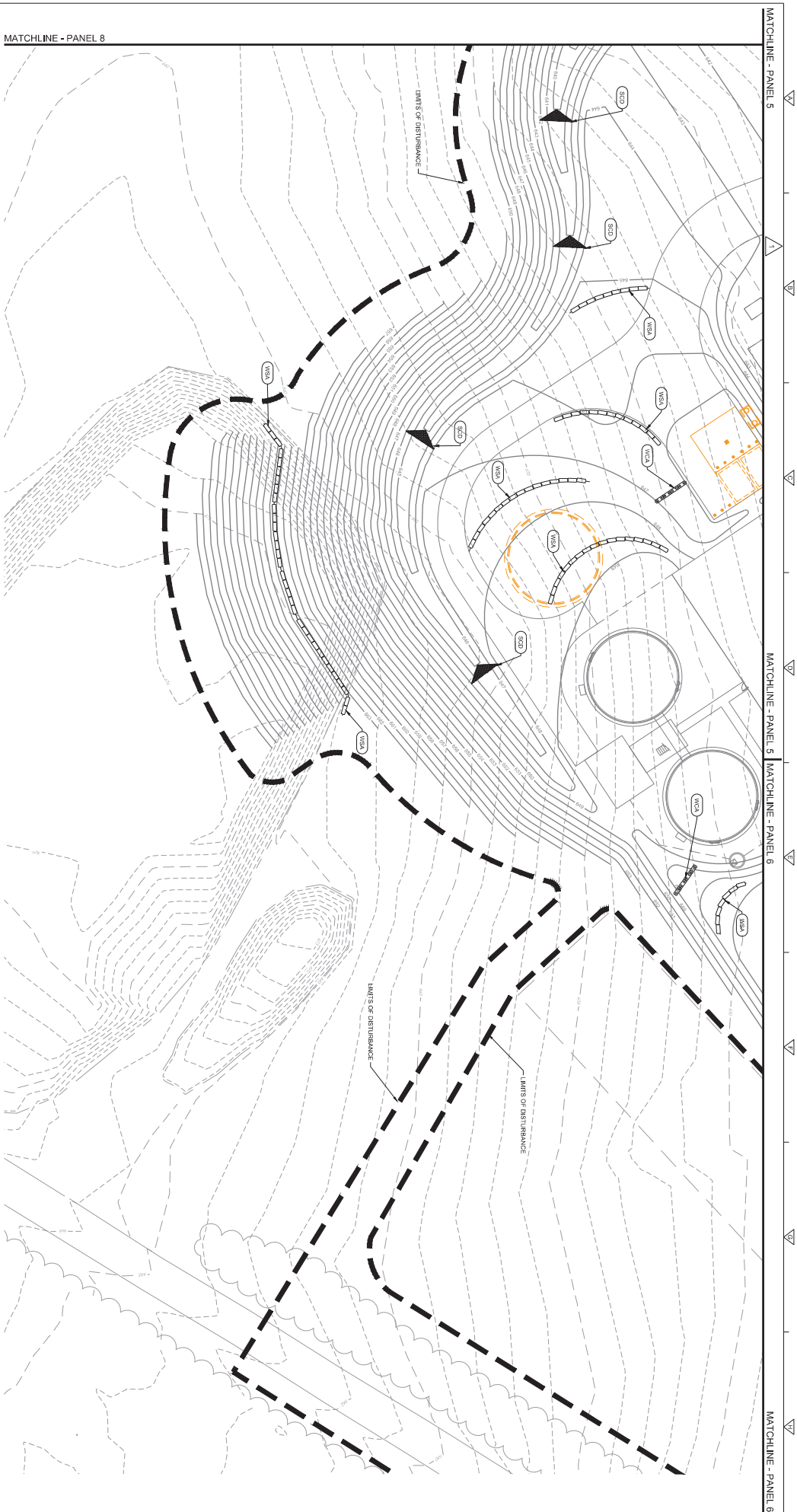


MATCHLINE - PANEL 5

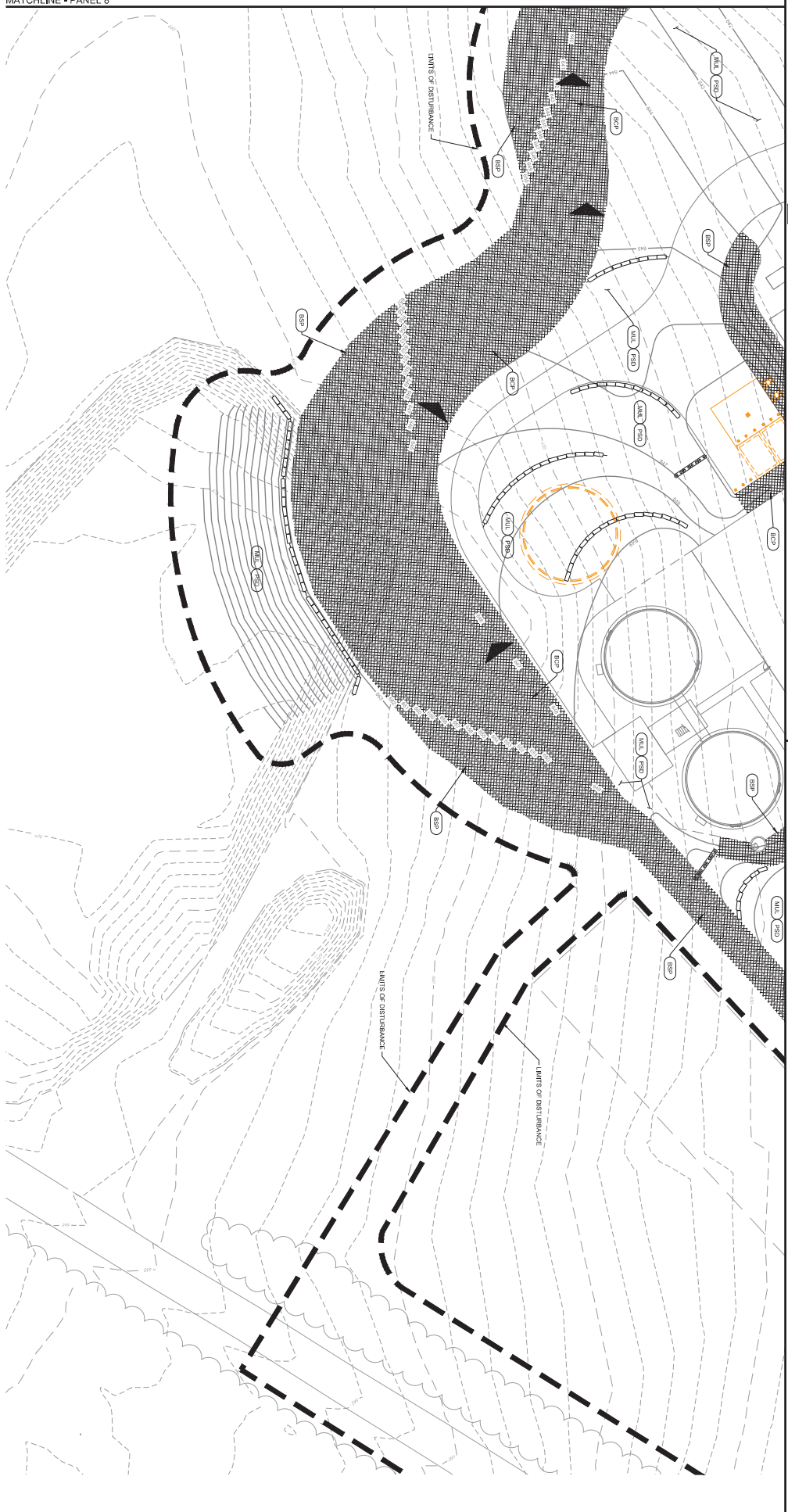
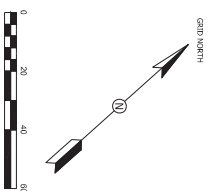
MATCHLINE - PANEL 5 MATCHLINE - PANEL 6

MATCHLINE - PANEL 6

SCS	PAVILIZED CONSTRUCTION EXIT	B / C/D4
NAL	WOOD LAYER SPREADER	C / C/D4
CWD	CONCRETE WASHOUT	S / C/D4
SPN	SEEDING POND	Q / C/D4
NAL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TSD	TEMPORARY SEEDING	N/A
TRD	PERMANENT SEEDING	N/A



SCB	STABILIZED CONSTRUCTION EXIT	B / C/D1
WLS	WOOD LEVEL SPREADER	C / C/D1
CWD	CONCRETE WASHOUT	S / C/D2
SRD	SEDIMENT POND	C / C/D2
MAL	STRAW MULCH @ 3 TONS PER ACRE	N/A
TRD	TEMPORARY SEEDING	N/A
PRD	PERMANENT SEEDING	N/A

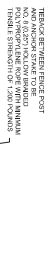


MATCHLINE - PANEL 6

CITY OF FRANKLIN, TENNESSEE
WATER RECLAMATION FACILITY

EROSION PREVENTION & SEDIMENT CONTROL PLAN
PANEL 9 - FINAL PHASE

CONFORMED DRAWING - AUGUST 2018



(WHEN REQUIRED BY THE ENGINEER OR NOTED IN THE PLANS
COST TO BE INCLUDED IN THE ITEMS FOR SILT FENCE)



(A)



三

	RIS	TUL	RM	COMPOSED DEARING	
REF:	DATE	DIVN	CHNO		RELAYS
OS.					



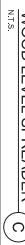
N.T.S.



CENTERLINE CROSS SECTION

1. Sediment shall be removed when the sediment has accumulated to one-half the height of the stone bench.
2. Coarse aggregate shall be TDOT #3, #57, or #5 coarse aggregate.
3. Filter cloth shall be Class A, matched riprap per TDOT standard specifications section 709.03.
4. Riprap shall meet the requirements of TDOT specification section 918.27.
5. The maximum drainage area to the culvert being protected is 3 acres.
6. See Notes for "H" dimension.
7. The stone area and the culvert embankment a minimum of 1 foot above the design elevation of the stone bench.

(7)



N.T.S.

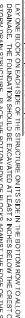


6

-
- DO NOT EXCEED 15 METERS (50 FEET) LONG
ALLOW THE ROLLS TO UNROLL TO AVOID IRREGULARITIES
SLOPE SURFACE SHALL BE SMOOTH BEFORE
PLACEMENT FOR PROPER SOIL CONTACT
ANCHOR STAPLE AND INSTALL CHECK
SLOTS AND ANCHOR STAPLES
AVOID JOINING MATERIAL IN THE
CENTER OF THE DITCH
USE FERTILIZER AND SEED
BEFORE INSTALLATION



1

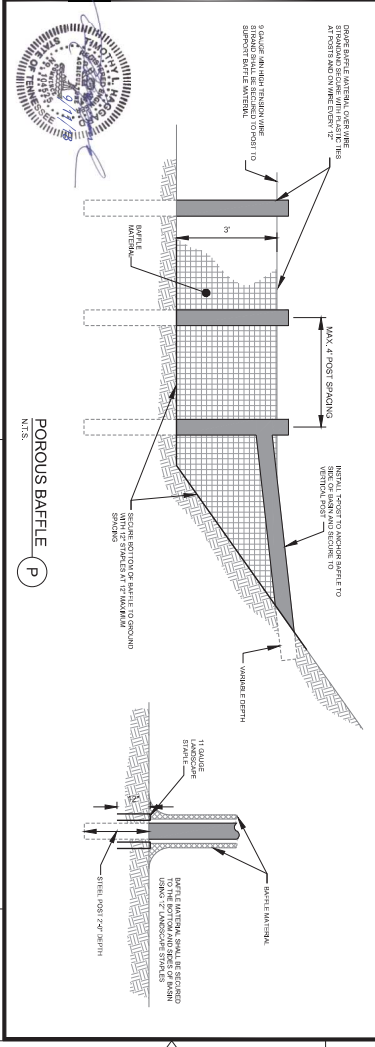
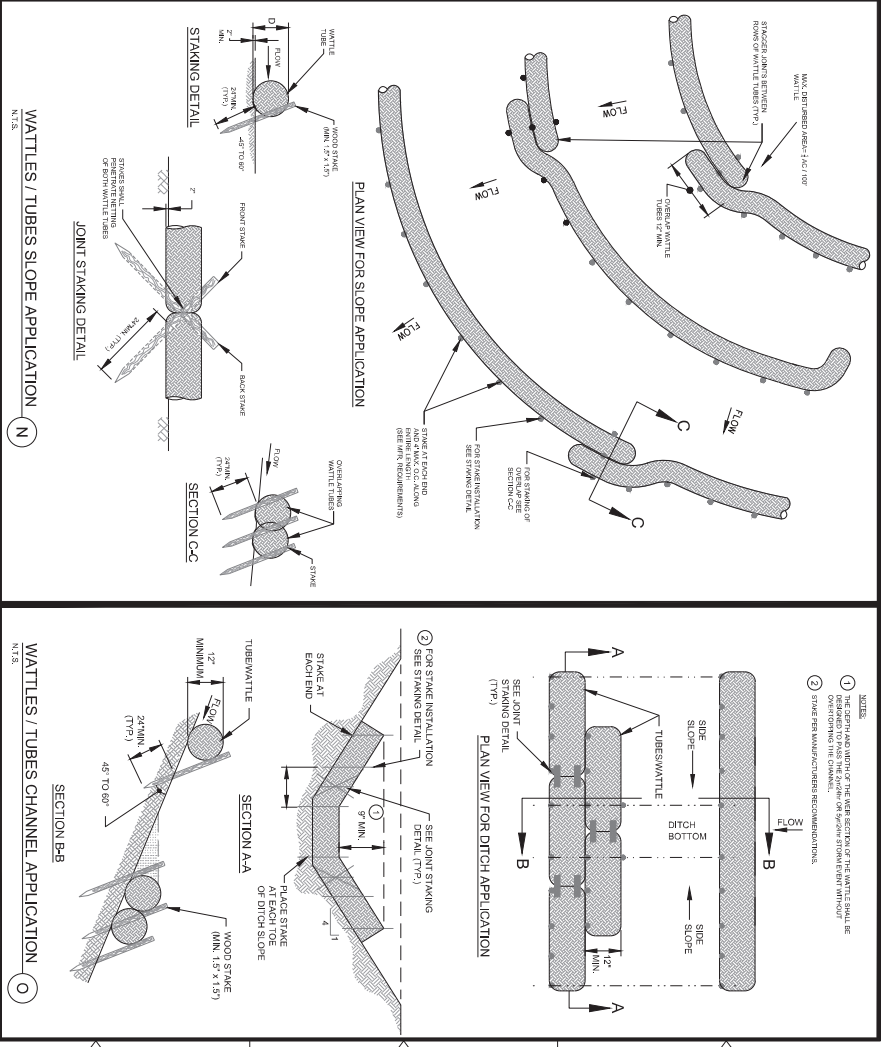
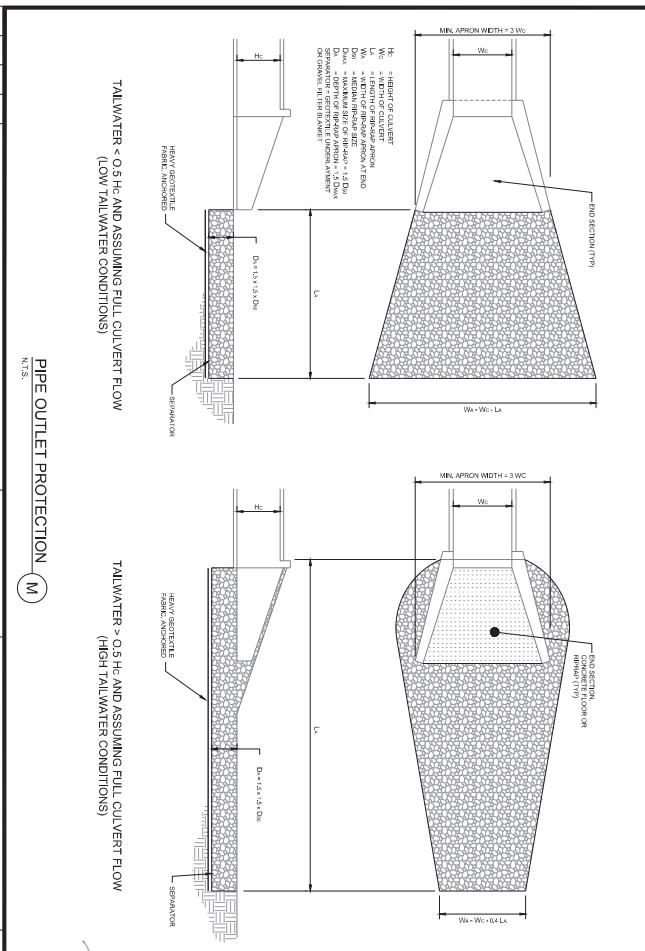
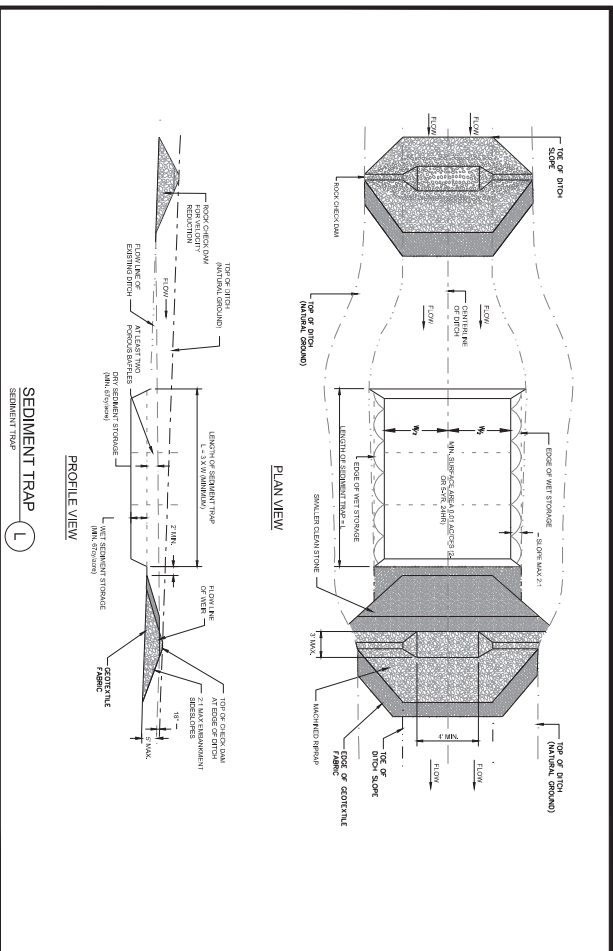


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DESIGNED BY	_____	TEL	_____
DRAWN BY	_____	TEL	_____
CHECKED BY	_____	EMAIL	_____
CROSS CHECK BY	_____	PROJECT NO.	_____
APPROVED BY	_____	DATE	_____
DATE	_____	APP'D	_____



CDM Smith



CITY OF FRANKLIN

CONCRETE REPAIRING

207 Jackson Blvd.
Franklin, TN 37068
Tel: 615.320.3181

CONCRETE REPAIRING

207 Jackson Blvd.
Franklin, TN 37068
Tel: 615.320.3181

CITY OF FRANKLIN, TENNESSEE

WATER RECLAMATION FACILITY

MODIFICATIONS AND EXPANSION PROJECT

COF CONTRACT NO. 2017-0264

CIVIL DETAILS

CONCRETE REPAIRING

207 Jackson Blvd.
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Tel: 615.320.3181

CONCRETE REPAIRING

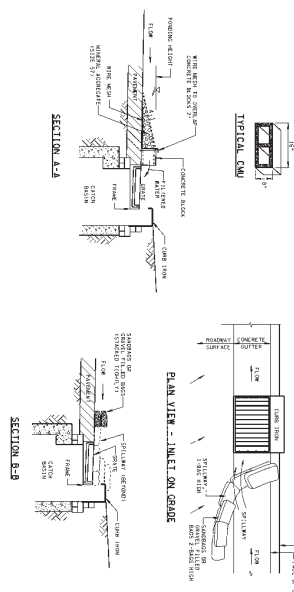
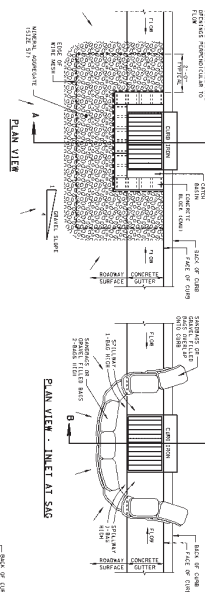
207 Jackson Blvd.
Franklin, TN 37068
Tel: 615.320.3181

CONCRETE REPAIRING

CURB INLET PROTECTION TYPE
LOW VOLUME, LOW SPEED TRAFFIC AREAS ONLY

URB INLET PROTECTION TYPE 2
LOW VOLUME, LOW SPEED TRAFFIC AREAS ONLY

CURB INLET PROTECTION TYPE 1 GENERAL NOTES

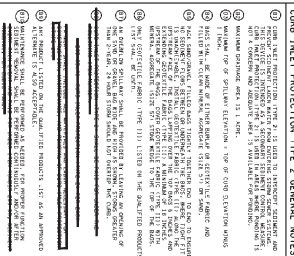
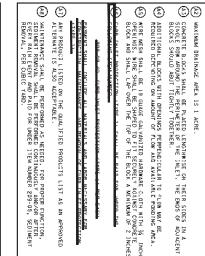


CURB INLET PROTECTION
N.T.S. (REFERENCE TDOT STD. DWG. EC-STR-39)

N.T.S. (REFERENCE TDOT STD. DWG. EC-STR-39)

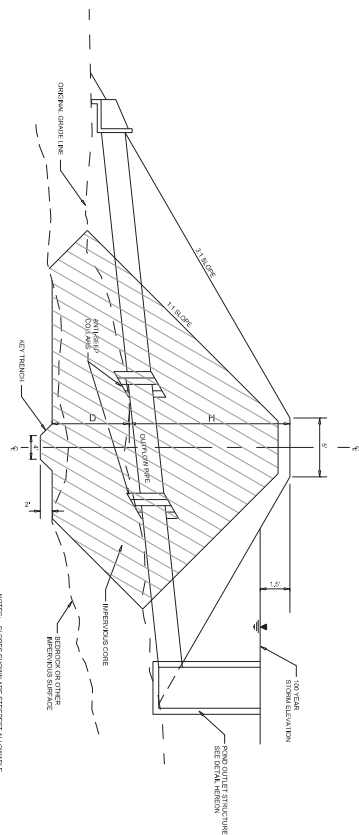
CURB INLET PROTECTION TYPE 2
LOW VOLUME, LOW SPEED TRAFFIC AREAS ONLY

CURB INLET PROTECTION TYPE 1 GENERAL NOTES



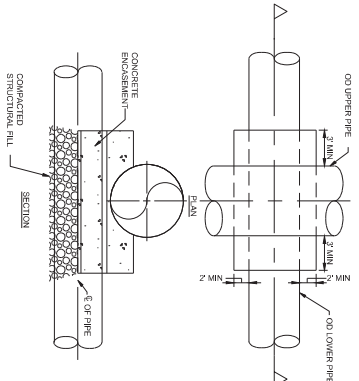
DETENTION POND BERM SECTION

MTS



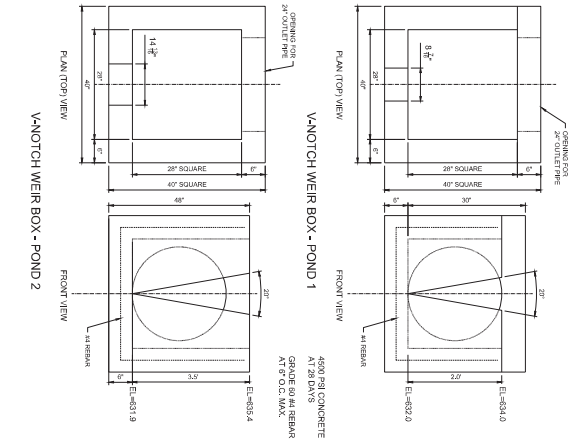
NOTES: SLOPES SHOWN ARE STEEPEST ALLOWABLE.
CORE TO BE CLAY OR OTHER IMPERVIOUS MATERIAL.
D. DEPTH OF CORE MUST BE TO IMPERVIOUS MATERIAL
OR TO A MIN. DEPTH EQUAL TO "H".
CORE TO BE PLACED IN 6" LAYERS & COMPACTED TO
95% STANDARD PROCTOR.

CONCRETE PIPE CRADLE



DETENTION POND OUTLET STRUCTURES

N.T.S.

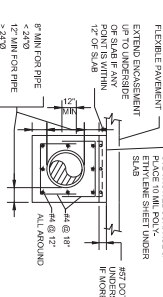


CIVIL DETAILS



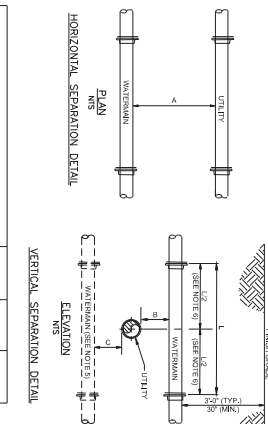
PIPE ENCASEMENT UNDER PAVEMENT

FIFE ENCLOSUREMENT UNDER PAVEMENT



WATER MAIN CLEARANCE REQUIREMENTS

N.T.S.



	Utility	A (m/s)	B (m/s)
STORM SEWER	3.67	12*	
STORMWATER FORCE MAIN	3.67	12*	
FLUID ACCESS RECLAIMED WATER	3.67	12*	
VACUUM TYPE SANITARY SEWER	3.67	12*	
GRAVITY TYPE SANITARY SEWER	6.67	12*	
PRESSURIZED SANITARY SEWER	6.67	12*	
NORMAL ACCESS RECLAIMED WATER	6.67	12*	
FLUID ACCESS RECLAIMED WATER	6.67	12*	
CHIEF SEWERAGE TREATMENT AND DISPOSAL SYSTEM	10.67	12*	

[illegible]

Appendix G

Construction Stormwater Inspection Certification



**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)**

Division of Water Resources

William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243

1-888-891-8332 (TDEC)

General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)**Construction Stormwater Inspection Certification (Twice-Weekly Inspections)**

Site or Project Name: City of Franklin Water Reclamation Facility		NPDES Tracking Number: TNR
Primary Permittee Name: City of Franklin, TN		Date of Inspection:
Current approximate disturbed acreage:	Has rainfall been checked/documented daily? ☐ Yes ☐ No	Name of Inspector:
Current weather conditions:		Inspector's Training Certification Number:

Please check the box if the following items are on-site:

- ☐ Notice of Coverage (NOC) ☐ Stormwater Pollution Prevention Plan (SWPPP) ☐ Twice-weekly inspection documentation
☐ Site contact information ☐ Rain Gage ☐ Off-site Reference Rain Gage Location: _____

Best Management Practices (BMPs):**Are the Erosion Prevention and Sediment Controls (EPSCs) functioning correctly:** If "No," describe below in Comment Section

- | | | |
|--|------------------------------|--|
| 1. Are all applicable EPSCs installed and maintained per the SWPPP? | ☐ Yes | ☐ No |
| 2. Are EPSCs functioning correctly at all disturbed areas/material storage areas per section 4.1.5? | ☐ Yes | ☐ No |
| 3. Are EPSCs functioning correctly at outfall/discharge points such that there is no objectionable color contrast in the receiving stream, and no other water quality impacts per section 5.3.2? | ☐ Yes | ☐ No |
| 4. Are EPSCs functioning correctly at ingress/egress points such that there is no evidence of track out? | ☐ Yes | ☐ No |
| 5. If applicable, have discharges from dewatering activities been managed by appropriate controls per section 4.1.4? If "No," describe below the measures to be implemented to address deficiencies. | ☐ Yes | ☐ No |
| 6. If construction activity at any location has temporarily/permanently ceased, was the area stabilized within 14 days per section 3.5.3.2? If "No," describe below each location and measures taken to stabilize the area(s) | ☐ Yes | ☐ No |
| 7. Have pollution prevention measures been installed, implemented, and maintained to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters per section 4.1.5? If "No," describe below the measures to be implemented to address deficiencies. | ☐ Yes | ☐ No |
| 8. If a concrete washout facility is located on site, is it clearly identified on the project and maintained? If "No," describe below the measures to be implemented to address deficiencies. | ☐ N/A | ☐ Yes ☐ No |
| 9. Have all previous deficiencies been addressed? If "No," describe remaining deficiencies in Comment section.
☐ Check if deficiencies/corrective measures have been reported on a previous form. | ☐ Yes | ☐ No |

Comment Section. If the answer is "No" for any of the above, please describe the problem and corrective actions to be taken. Otherwise, describe any pertinent observations:

Certification and Signature (must be signed by the certified inspector and the permittee per Sections 3.5.8.2 (g) and 7.7.2 of the CGP)

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Inspector Name and Title:	Signature:	Date:
Primary Permittee Name and Title:	Signature:	Date:

Construction Stormwater Inspection Certification Form (Twice-Weekly Inspections)

Purpose of this form/ Instructions

An inspection, as described in section 3.5.8.2. of the General Permit for Stormwater Discharges from Construction Activities ("Permit"), shall be performed at least twice every calendar week and documented on this form. Inspections shall be performed at least 72 hours apart. Where sites or portion(s) of construction sites have been temporarily stabilized, or runoff is unlikely due to winter conditions (e.g., site covered with snow or ice), such inspection only has to be conducted once per month until thawing results in runoff or construction activity resumes.

As described in section 3.5.8.1 of the Permit, inspectors performing the required twice weekly inspections must have an active certification by completing the "Fundamentals of Erosion Prevention and Sediment Control Level I" course (<http://www.tnepsc.org/>). Twice weekly inspections can also be performed by: a licensed professional engineer or landscape architect; a Certified Professional in Erosion and Sediment Control (CPESC) or a person who has successfully completed the "Level II Design Principles for Erosion Prevention and Sediment Control for Construction Sites" course. A copy of the certification or training record for inspector certification should be kept on site.

Qualified personnel, (provided by the permittee or cooperatively by multiple permittees) shall inspect disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, locations where vehicles enter or exit the site, and each outfall.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the site's drainage system. Erosion prevention and sediment control measures shall be observed to ensure that they are operating correctly.

Outfall points (where discharges leave the site and/or enter waters of the state) shall be inspected to determine whether erosion prevention and sediment control measures are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations shall be inspected. Locations where vehicles enter or exit the site shall be inspected for evidence of offsite sediment tracking.

Based on the results of the inspection, any inadequate control measures or control measures in disrepair shall be replaced or modified, or repaired as necessary, before the next rain event if possible, but in no case more than 7 days after the need is identified.

Based on the results of the inspection, the site description identified in the SWPPP in accordance with section 3.5.1 of the Permit and pollution prevention measures identified in the SWPPP in accordance with section 3.5.2 of the Permit, shall be revised as appropriate, but in no case later than 7 days following the inspection. Such modifications shall provide for timely implementation of any changes to the SWPPP, but in no case later than 14 days following the inspection.

All inspections shall be documented on this Construction Stormwater Inspection Certification form. Alternative inspection forms may be used as long as the form contents and the inspection certification language are, at a minimum, equivalent to the division's form and the permittee has obtained a written approval from the division to use the alternative form. Inspection documentation will be maintained on site and made available to the division upon request. Inspection reports must be submitted to the division within 10 days of the request.

Trained certified inspectors shall complete inspection documentation to the best of their ability. Falsifying inspection records or other documentation or failure to complete inspection documentation shall result in a violation of this permit and any other applicable acts or rules.

Appendix H

Notice of Intent (NOI)

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION**

Division of Water Resources

William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243

1-888-891-8332 (TDEC)

Notice of Intent (NOI) for General NPDES Permit for Stormwater Discharges from Construction Activities (TNR100000)

Site or Project Name: City of Franklin Water Reclamation Facility		NPDES Tracking Number: TNR	
Street Address or Location: 135 Claude Yates Drive, Franklin, TN 37064		Construction Start Date: 11/01/18	
		Estimated End Date: 10/31/21	
Site Description: Existing Water Reclamation Facility (Wastewater Plant)		Latitude (dd.dddd): 35.9413°	
		Longitude (-dd.dddd): -86.8695°	
County(ies): Williamson		MS4 (if applicable): Franklin	
Acres Disturbed: 40.3 Acres		Total Acres: 109.6 Acres	
Check box if a SWPPP is attached : ☒		Check box if a site location map is attached: ☒	
Check the appropriate box(s) if there are streams and/or wetlands on or adjacent to the construction site: Streams ☒ Wetlands ☐			
Has a jurisdictional determination been made by the USACE or EPA identifying waters of the United States?: Yes ☐ No ☒			
Note: if yes, attach the jurisdictional determination			
If an Aquatic Resource Alteration Permit (ARAP) has been obtained for this site, what is the permit number? NR(S) n/a			
Receiving waters: Harpeth River			

Site Owner/Developer (Primary Permittee): (Provide person, company, or entity that has operational or design control over construction plans and specifications): City of Franklin, TN (owner)			
For corporate entities only, provide correct Tennessee Secretary of State (SOS) Control Number: n/a (an incorrect SOS control number may delay NOI processing)			
Site Owner or Developer Contact Name: (signs the certification below) Mark Hilty		Title or Position: Assistant City Administrator	
Mailing Address: City Hall, 109 3rd. Avenue South		City: Franklin	State: TN Zip: 37064
Phone: (615) 791-3217	Fax: () n/a	E-mail: mark.hilty@franklintn.gov	

Optional Contact: Brian Goodwin, PE		Title or Position: Assistant Director of Water Management	
Mailing Address: 124 Lumber Drive		City: Franklin	State: TN Zip: 37064
Phone: (615) 794-4554	Fax: () n/a	E-mail: brian.goodwin@franklintn.gov	

Owner/Developer(s) Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Primary Permittee)		
I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.		
Owner/Developer Name (print/type): City of Franklin, TN	Signature:	Date:
Owner/Developer Name (print/type): n/a	Signature:	Date:

Contractor Certification: (must be signed by president, vice-president or equivalent, or ranking elected official) (Secondary Permittee)		
I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above and/or my inquiry of the person directly responsible for assembling this NOI and SWPPP, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements. As specified in Tennessee Code Annotated Section 39-16- 702(a)(4), this declaration is made under penalty of perjury.		
Contractor name, address, and SOS control number (if applicable): Kiewit Infrastructure South Co, Norcross,GA (SOS# 000037764)	Signature:	Date:

OFFICIAL STATE USE ONLY

Received Date:	Reviewer:	Field Office:	Permit Tracking Number: TNR	Exceptional TN Water:
Fee(s):	T & E Aquatic Flora/Fauna:	SOS Corporate Status:	Waters with Unavailable Parameters:	Notice of Coverage Date:

CONSTRUCTION GENERAL PERMIT - NOTICE OF INTENT (NOI) - INSTRUCTIONS

A completed NOI must be submitted to obtain coverage under the CGP. **Requesting coverage under this permit means that an applicant has obtained and examined a copy of this permit, and thereby acknowledges applicant's claim of ability to be in compliance with permit terms and conditions.** CGP coverage is required for stormwater (SW) discharge(s) from construction activities including clearing, grading, filling and excavating (including borrow pits) of one or more acres of land. This form should be submitted at least 30 days prior to the commencement of land disturbing activities, or no later than 48 hours prior to when a new operator assumes operational control over site specifications or commences work at the site.

The application fee must accompany the NOI and is based on total acreage to be disturbed by an entire project, including any associated construction support activities (e.g., equipment staging yards, material storage areas, excavated material disposal areas, borrow or waste sites, etc.). A separate annual maintenance fee is also required for activities that exceed 1 year under CGP coverage. See TN Rules, Chapter 0400-40-11-.02(b)(12).

Acres Disturbed	= or > 150 acres	= or > 50 < 150 acres	= or > 20 < 50 acres	= or > 5 < 20 acres	= or > 1 < 5 acres	Subsequent coverage
Fee	\$10,000	\$6,000	\$3,000	\$1,000	\$250	\$100

Who must submit the NOI form? All site operators must submit an NOI form. "Operator" for the purpose of this permit and in the context of SW associated with construction activity means any person associated with a construction project who meets either or both of the following two criteria: (1) The person has operational or design control over construction plans and specifications, including the ability to make modifications to those plans and specifications. This person is typically the owner or developer of the project or a portion of the project (e.g., subsequent builder), or the person that is the current land owner of the construction site, and is considered the primary permittee; or (2) The person has day-to-day operational control of those activities at a project which are necessary to ensure compliance with a SWPPP for the site or other permit conditions. This person is typically a contractor or a commercial builder who is hired by the primary permittee, and is considered a secondary permittee.

Owners, developers and all contractors that meet the definition of the operator in subsection 2.2 of the permit shall apply for permit coverage on the same NOI, insofar as possible. After permit coverage has been granted to the initial site-wide primary permittee, any subsequent NOI submittals must include the site's previously assigned permit tracking number and the project name. The comprehensive site-specific SWPPP shall be prepared in accordance with the requirements of part 3 of the permit and must be submitted with the NOI unless the NOI being submitted is to add a subsequent permittee to an existing coverage. **Artificial entities (e.g., corporations or partnerships) must submit the correct Tennessee Secretary of State, Division of Business Services, control number. General partnerships. For general partnerships, the NOI must be signed by each general partner in the general partnership.**

The NOI will be considered incomplete without a correct control number, and the division reserves the right to deny coverage to artificial entities that are not properly registered and in good standing with the Tennessee Secretary of State (i.e., listed with an entity status of "active"). The division further reserves the right to issue permit coverage in the correct legal name of the individual or entity seeking coverage and to name each general partner of a general partnership in addition to the general partnership.

Complete the form: Type or print clearly. Answer each item or enter "NA," for not applicable. If you need additional space, attach a separate piece of paper to the NOI form. **The NOI will be considered incomplete without a permit fee and comprehensive site-specific SWPPP (if applicable).**

Describe and locate the project: Use the legal or official name of the construction site. If a construction site lacks street name or route number, give the most accurate information available to describe the location (reference to adjacent highways, roads and structures; eg., intersection of state highways 70 and 100). Latitude and longitude (in decimal degrees) can be found at numerous other web sites. Attach a copy of a map, showing location of site, with boundaries at least one mile outside the site boundaries. Provide estimated starting date of clearing activities and completion date of the project, and an estimate of the number of acres of the site on which soil will be disturbed, including borrow areas, fill areas, stockpiles and the total acres. For linear projects, give location at each end of the construction area.

Name of the receiving waters: Trace the route of stormwater runoff from the site and determine the name of the water course(s) into which the runoff drains. Note that the water course may or may not be located on the construction site. If the first water body receiving construction site runoff is unnamed ("unnamed tributary"), determine the name of the waterbody that the unnamed tributary enters.

An ARAP may be required: **If your work will disturb or cause alterations of a stream or wetland, you must obtain an appropriate Aquatic Resource Alteration Permit (ARAP).** If wetlands are located on-site and may be impacted, attach the wetland delineation report. If you have a question about the ARAP program, contact your local Field Office (EFO).

Submitting the form and obtaining more information: Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality, for details see subpart 2.5. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed NOI form (keep a copy for your records) to the appropriate EFO for the county(ies) where the construction activity is located, addressed to **Attention: Stormwater NOI Processing.**

Notice of Coverage: The division will review NOIs for completeness and accuracy and issue an NOC to site-wide primary operators, authorizing SW discharge from the construction site as of the effective date of the NOC. New subsequent operators will not receive an NOC, but are considered covered under the permit when their permit record is published on TDEC's dataviewer as "active" and with an effective date. TDEC Permit Dataviewer can be found at: http://environment-online.tn.gov:8080/pls/enf_reports/f?p=9034:34001:0

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	1301 Riverfront Pkwy, Suite 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601

Appendix I

Notice of Termination (NOT)

**TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC)**

Division of Water Resources

William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243

1-888-891-TDEC (8332)

Notice of Termination (NOT) for General NPDES Permit for Stormwater Discharges from Construction Activities (CGP)

This form is required to be submitted when requesting termination of coverage from the CGP. The purpose of this form is to notify the TDEC that either all stormwater discharges associated with construction activity from the portion of the identified facility where you, as an operator, have ceased or have been eliminated; or you are no longer an operator at the construction site. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the local DWR Environmental Field Office (EFO) address (see table below). For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC).

Type or print clearly, using ink.

Site or Project Name: City of Franklin Water Reclamation Facility	NPDES Tracking Number: TNR
Street Address or Location: 135 Claude Yates Dr, Franklin, TN 37067	County(ies): Williamson

Name of Permittee Requesting Termination of Coverage: City of Frankin, TN			
Permittee Contact Name:		Title or Position:	
Mailing Address:	City:	State:	Zip:
Phone:	E-mail:		

Check the reason(s) for termination of permit coverage:

☐	Stormwater discharge associated with construction activity is no longer occurring and the permitted area has a uniform 70% permanent vegetative cover OR has equivalent measures such as rip rap or geotextiles, in areas not covered with impervious surfaces.
☐	You are no longer the operator at the construction site (i.e., termination of site-wide, primary or secondary permittee coverage).

Certification and Signature: (must be signed by president, vice-president or equivalent ranking elected official)

I certify under penalty of law that either: (a) all stormwater discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

For the purposes of this certification, elimination of stormwater discharges associated with construction activity means that all stormwater discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have been eliminated from the portion of the construction site where the operator had control. Specifically, this means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized, the temporary erosion and sediment control measures have been removed, and/or subsequent operators have obtained permit coverage for the site or portions of the site where the operator had control.

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

Permittee name (print or type):	Signature:	Date:
---------------------------------	------------	-------

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett, TN	38133	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305	Chattanooga	1301 Riverfront Parkway, Ste. 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601



Kiewit

Kiewit Infrastructure South Co.
4405 International Blvd., NW, Suite C-101
Norcross, GA 30093

April 26, 2019

To: Attn: Mr. Dan Harris

GC-KIEWIT-00010.00

CDM Smith, Inc.
210 25th Avenue North
Suite 1102
Nashville, TN 37203

Reference: Franklin WRF Modifications & Expansion Project
COF Contract No. 2017-0264

Subject: CCA-002 Reissuance of Select Civil Drawings and Final SWPP

Dear Mr. Harris,

Kiewit has received **Construction Change Authorization (CCA) 002** regarding the **Reissuance of Select Civil Drawings and Final SWPP**. Upon further evaluation of this CCA, Kiewit is in agreement that the changes identified in this CCA will result in **no cost or schedule impact** to the above referenced contract.

If you have any questions, please do not hesitate to contact me at (678) 794-2121.

Sincerely,

Steve Davis
Project Manager

cc: File
Michelle Hatcher

CONSTRUCTION CHANGE AUTHORIZATION

TO: Mr. Steve Davis
Project Manager
Klewit Water Facilities South
4405 International Blvd., NW,
Suite C-101
Norcross, Georgia 30093
(770) 940-8044

FROM: CDM Smith
3715 Northside Parkway NW
Building 300, Suite 400
Atlanta, GA 30327
(404) 720-1400

DATE: November 20, 2018

PROJECT: City of Franklin, Tennessee
Franklin WRF Modifications & Expansion Project

CCA NUMBER: 003 **CDM SMITH PROJ. NO.:** 14915-231666

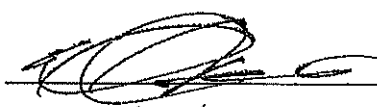
SUBJECT: Structural Aluminum Stair Support **CITY PROJECT NO.:** 2017-0264

REFERENCE: S-13

DESCRIPTION: At the request of the Contractor per RFI No. 008, item 1, the I14 x 16.0 aluminum support beams shown on Sections 1 and 2, Sh. S-13 may be revised to I12 x 14.3 with spacers per attached Figures SK-1 and SK-2.

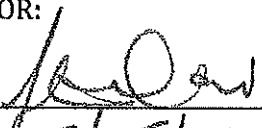
ATTACHMENTS: Fig. SK-1, SK-2

CDM SMITH:

By: 

Date: 2/6/19

CONTRACTOR:

By: 

Date: 2/25/2019

City of Franklin:

By: 

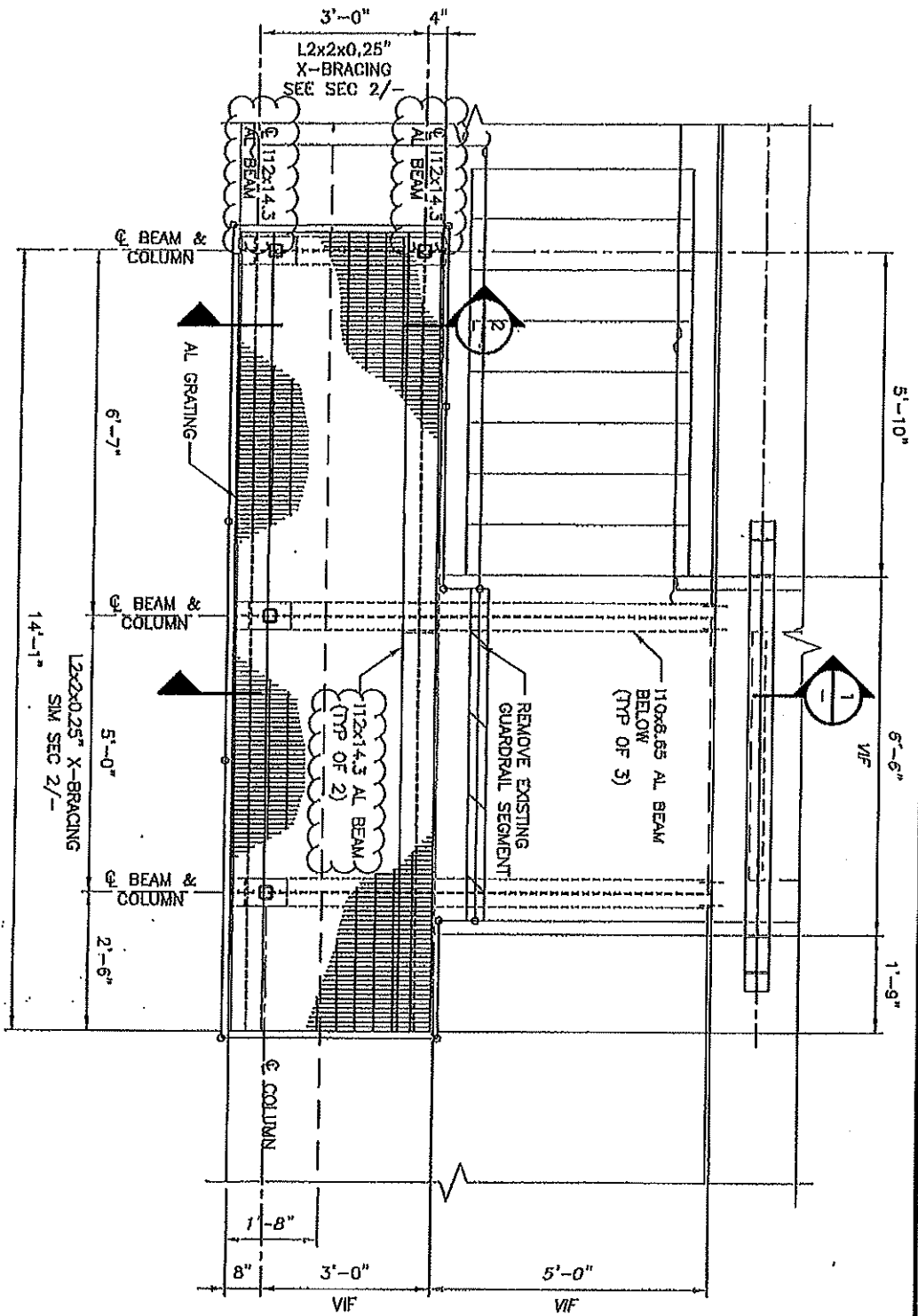
Date: 2/6/19

**CDM
Smith**

ENLARGED PLAN

PLAN

1/2" = 1'-0"



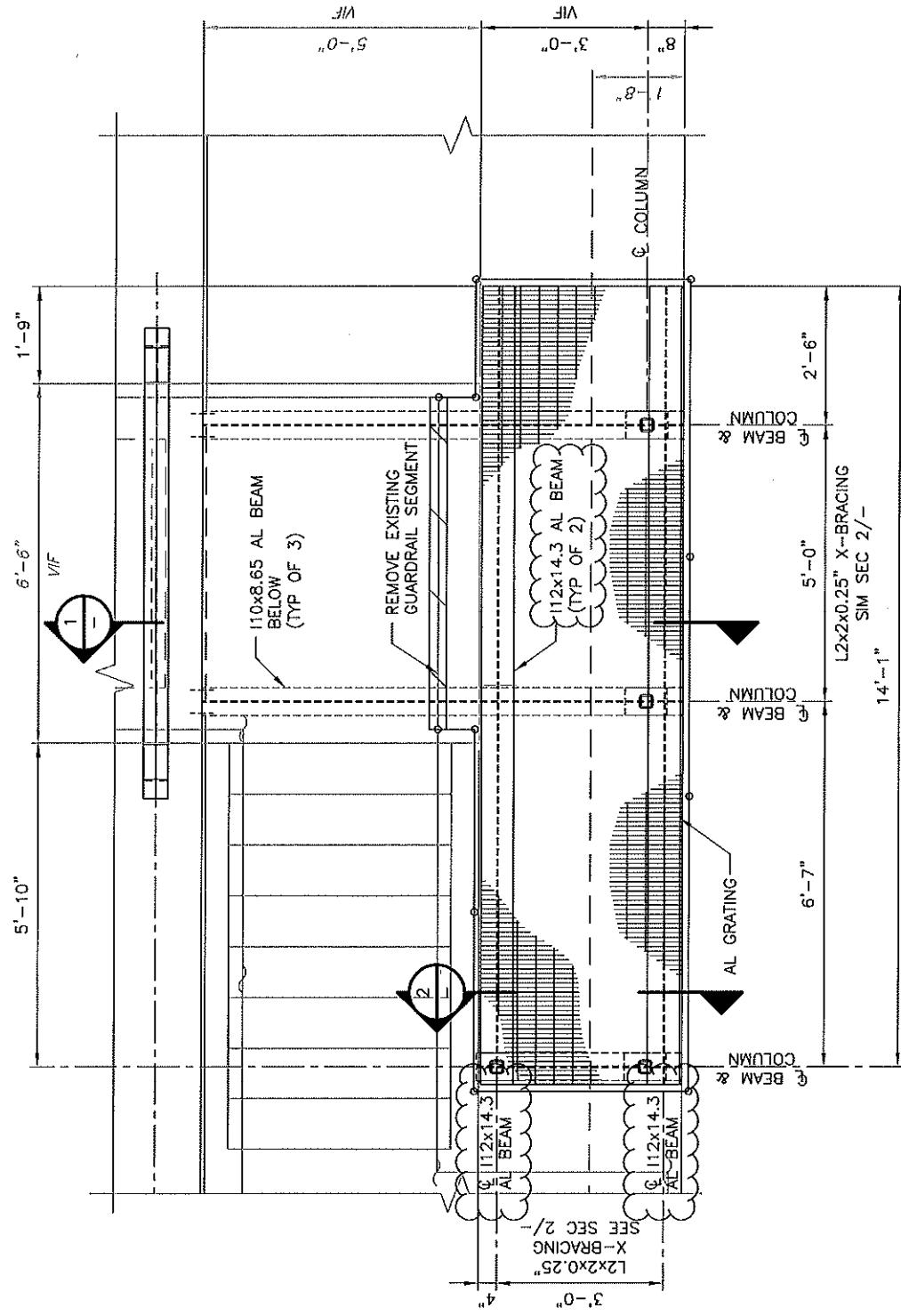
DATE JAN 2019

SHEET NO. LOCATION

APPENDIX NO.

FIGURE NO.

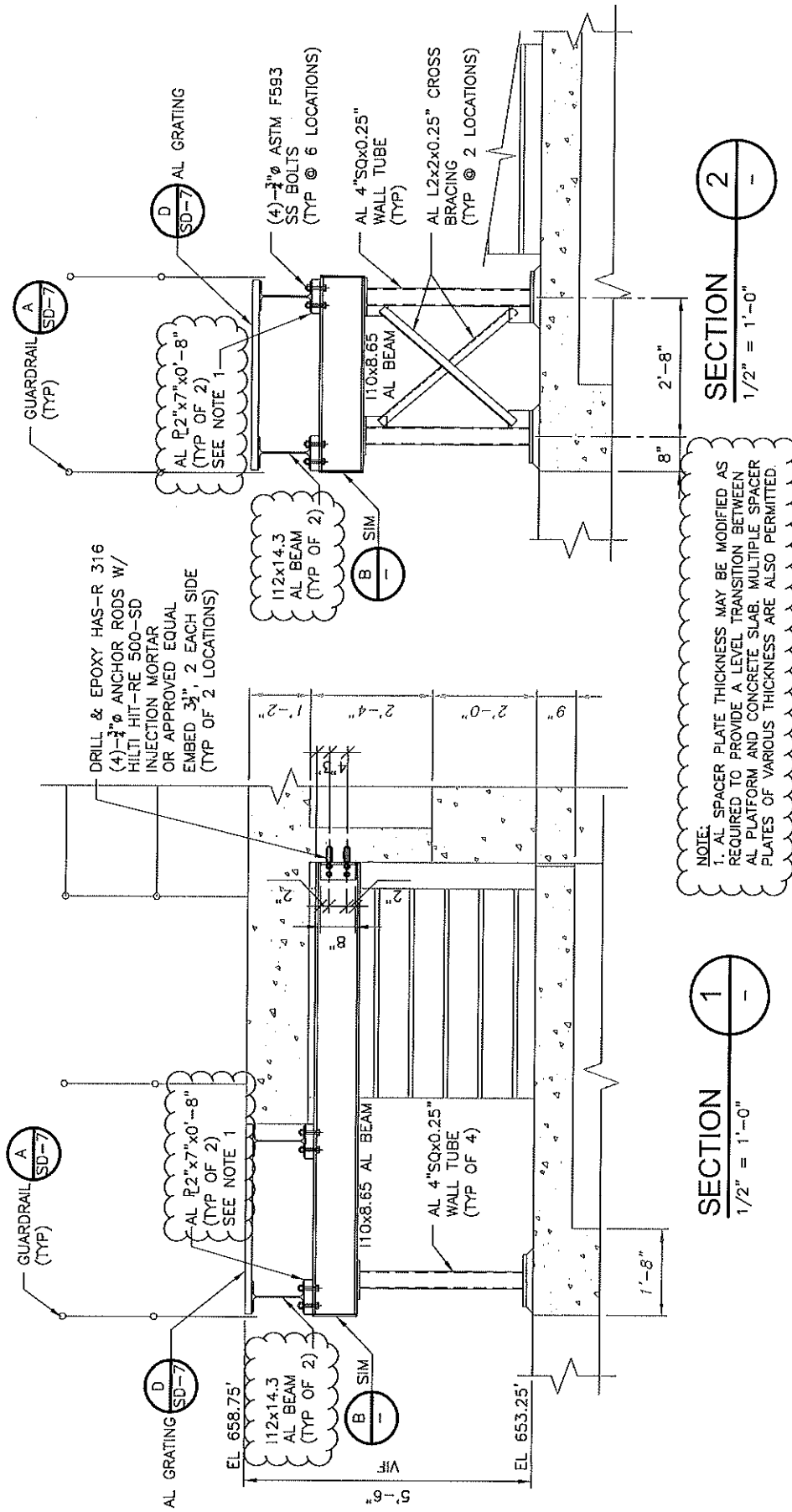
SK-1



ENLARGED PLAN
PLAN
1/2" = 1'-0"



FIGURE NO.	ADDENDUM NO.	SHEET NO.	LOCATION	DATE JAN 2019
SK-1				





Kiewit

Kiewit Infrastructure South Co.
4405 International Blvd., NW, Suite C-101
Norcross, GA 30093

April 26, 2019

To: Attn: Mr. Dan Harris

GC-KIEWIT-00011.00

CDM Smith, Inc.
210 25th Avenue North
Suite 1102
Nashville, TN 37203

Reference: Franklin WRF Modifications & Expansion Project
COF Contract No. 2017-0264

Subject: CCA-003 Structural Aluminum Stair Support

Dear Mr. Harris,

Kiewit has received **Construction Change Authorization (CCA) 003** regarding the **Structural Aluminum Stair Support**. Upon further evaluation of this CCA, Kiewit has determined that the changes identified in this CCA will result in **no cost or schedule impact** to the above referenced contract.

If you have any questions, please do not hesitate to contact me at (678) 794-2121.

Sincerely,

Steve Davis
Project Manager

cc: File
Michelle Hatcher

CONSTRUCTION CHANGE AUTHORIZATION

TO: Mr. Steve Davis
Project Manager
Kiewit Water Facilities South
4405 International Blvd., NW,
Suite C-101
Norcross, Georgia 30093
(770) 940-8044

FROM: CDM Smith
3715 Northside Parkway NW
Building 300, Suite 400
Atlanta, GA 30327
(404) 720-1400

DATE: March 7, 2019

PROJECT: City of Franklin, Tennessee
Franklin WRF Modifications & Expansion Project

CCA NUMBER: 004

CDM SMITH PROJ. NO.: 14915-231666

SUBJECT: Electrical Building

CITY PROJECT NO.: 2017-0264

REFERENCE: N/A

DESCRIPTION: Sheets S-38A, S-38, S-39, S-40 and S-41 are reissued to correct a drafting error in the Conformed Drawings.

ATTACHMENTS: Rev. Sh. S-38A, S-38, S-39, S-40, S-41

CDM SMITH:

By: _____

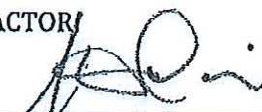
Date: _____


4/25/19

CONTRACTOR:

By: _____

Date: _____


April 2, 2019

City of Franklin:

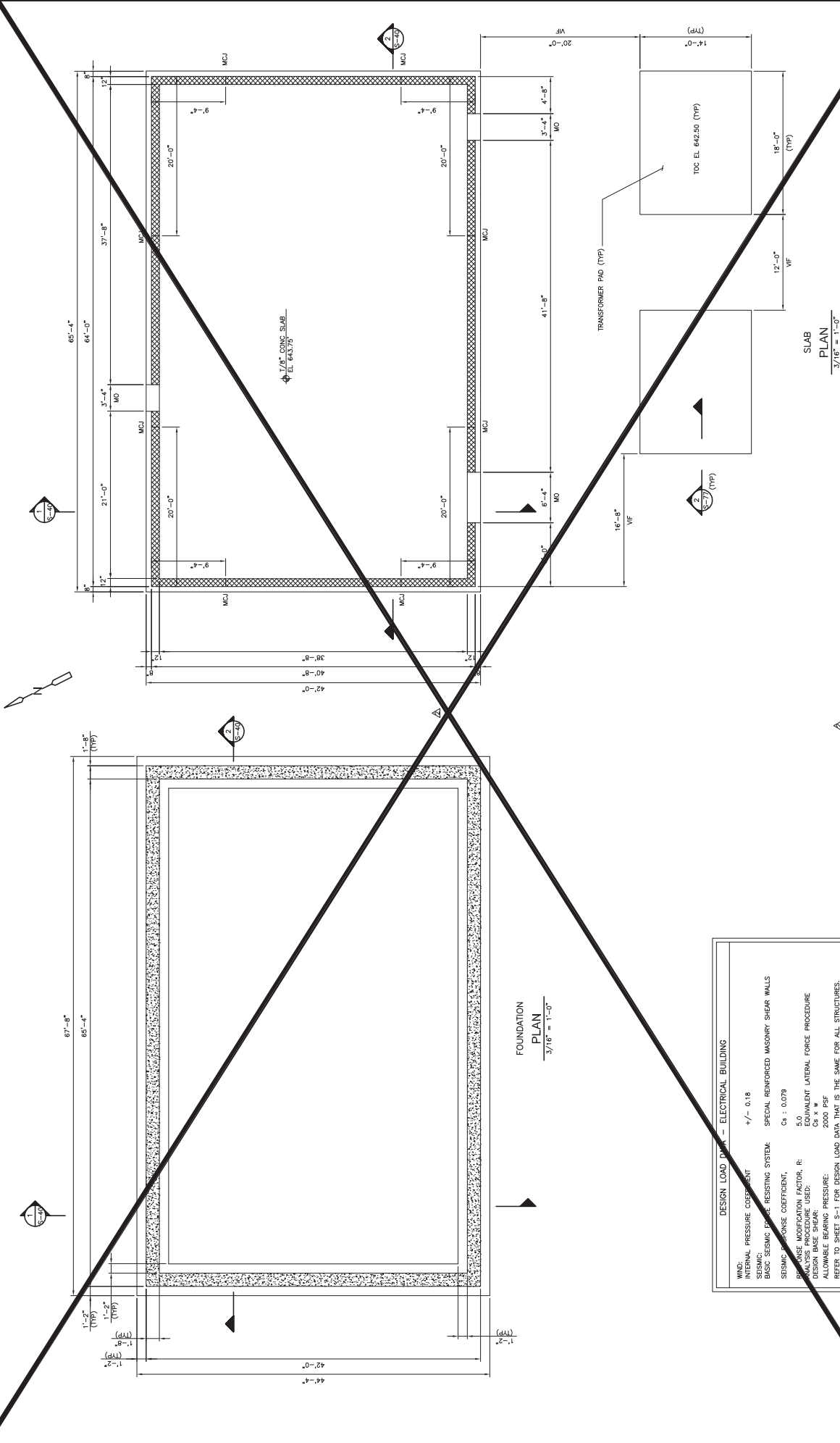
By: _____

Date: _____


4/26/19

CONFORMED DRAWING - AUGUST 2018

NOT IN CONTRACT



DESIGN LOAD DATA — ELECTRICAL BUILDING	
WIND: INTERNAL PRESSURE COEFFICIENT	+/- 0.18
SEISMIC: BASIC SEISMIC FORCE RESISTING SYSTEM:	SPECIAL REINFORCED MASONRY SHEAR WALLS
SEISMIC RESPONSE COEFFICIENT:	C _s = 0.079
SEISMIC MODIFICATION FACTOR, R:	5.0
ANALYSIS PROCEDURE USED:	EQUIVALENT LATERAL FORCE PROCEDURE
ALLOWABLE BEARING PRESSURE:	2000 PSF
REFER TO SHEET S-1 FOR DESIGN LOAD DATA THAT IS THE SAME FOR ALL STRUCTURES.	

PRECAST STRUCTURE NOTES:

1. SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TENNESSEE AND SHALL BE SUBMITTED TO THE CITY OF FRANKLIN, TENNESSEE, FOR REVIEW. PRECAST HOLLOW CORE SLABS SHALL BE DESIGNED TO MEET ALL APPLICABLE UNIFORM, POINT, AND CONCENTRATED LOADS.
2. ALL LOADS FROM EQUIPMENT, PIPING, AND MISC ITEMS LOCATED ON THE ROOF OR SUSPENDED FROM THE ROOF ARE TO BE VERIFIED BY THE PRECAST SUPPLIER WITH EACH INDIVIDUAL EQUIPMENT SUPPLIER. LETTERS STATING THE REQUIRED LOADS SHALL BE SUBMITTED WITH THE CALCULATIONS.
3. PRECAST HOLLOW CORE SLABS SHALL BE A MINIMUM 4HC10H2 PANELS.
4. PRECAST HOLLOW CORE SLABS SHALL BE DESIGNED BY THE PRECAST SUPPLIER FOR THE FOLLOWING LOADS: (ALL LOADS ARE SERVICE LEVEL)

- a. ROOF LOADS:
- i. SUPERIMPOSED DEAD LOAD: 28 PSF + TOPPING
 - ii. LIVE LOAD: 20 PSF
 - iii. SNOW LOAD: SEE DIAGRAM
 - iv. WIND PRESSURE: SEE DIAGRAM
 - v. RAIN LOAD: SEE DIAGRAM

5. THE HOLLOW-CORE PLANKS SHALL BE DESIGNED BY THE PRECAST MANUFACTURER TO ACT AS A DIAPHRAGM. THE PLANKS SHALL TRANSFER THE LATERAL LOADS TO THE CURVE SHEAR WALLS. THE LOADS USED FOR THE DESIGN OF THE PLANKS AND THEIR CONNECTIONS FOR DIAPHRAGM ACTION SHALL BE AS SHOWN IN THE DIAPHRAGM LOADING DIAGRAM.

6. HOLLOW CORE SLABS ADJACENT TO OPENINGS SHALL BE DESIGNED TO SUPPORT ALL LOADS FROM THE INTERRUPTED SLABS.

7. FOR ROOF OPENINGS, DRAINS AND DETAILS ALSO SEE "A", "M" AND "H" DRAWINGS.

8. STEEL HANGER ASSEMBLIES AT DRAINS SHALL BE PROVIDED BY THE HOLLOW CORE SLAB MANUFACTURER.

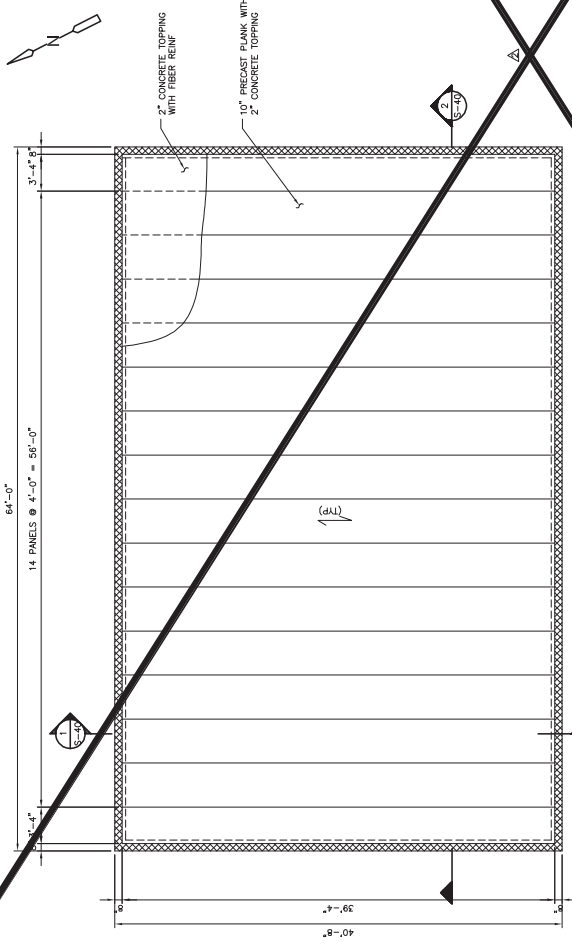
9. ALL HOLLOW-CORE PLANKS, HANGERS AND CONNECTIONS SHALL BE SHOWN ON SHEET S-401 AND SHOWN ONLY TO CONVEY THE INTENT OF THE DESIGN. ALL ANGLES, BRACES, BOLTS, REINFORCING BARS, WELDS AND OTHER ITEMS TO BE EMBEDDED IN THE HOLLOW-CORE PLANKS FOR THE TRANSFER OF THE INDICATED LOADS SHALL BE LOCATED AND DESIGNED BY THE HOLLOW-CORE PLANK MANUFACTURER.

10. ALL PRECAST PLANKS AND CONNECTIONS NOT SPECIFICALLY DETAILED SHALL BE PROVIDED BY THE HOLLOW-CORE PLANK MANUFACTURER AS REQUIRED.

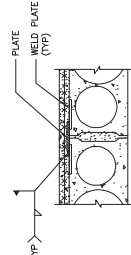
11. --- INDICATES SPAN DIRECTION OF HOLLOW-CORE PLANKS.

12. --- FOR TOP OF PLANK TO PLANK CONNECTION SEE DETAIL ON THIS SHEET.

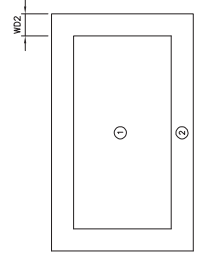
13. REFER TO SPECIFICATION SECTION 04420 FOR ADDITIONAL REQUIREMENTS FOR PRECAST, PRESTRESSED HOLLOW CORE PLANKS.



ROOF PLAN
1/16" = 1'-0"



TOP OF PLANK TO PLANK CONNECTION DETAIL
1" = 1'-0"



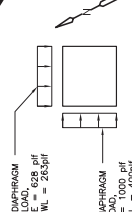
2012 INTERNATIONAL BUILDING CODE SECTION 1603.1.3 PRECAST SLABS SNOW PRESSURES (PSF)			
ZONE	MAXIMUM POSITIVE SNOW PRESSURE	MINIMUM POSITIVE SNOW PRESSURE	WIND-INDUCED SNOW PRESSURE
1	15.6	15.6	15.6
2	15.6	15.6	15.6

NOTE: SEE S-1 FOR SNOW LOAD DESIGN PARAMETERS.

SNOW LOADING
DIAGRAM 1
NTS

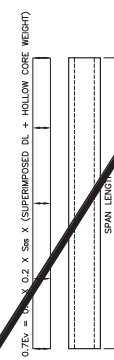
2012 INTERNATIONAL BUILDING CODE SECTION 1603.1.4-3 ROOFING MEMBRANES - PRECAST SLABS WIND PRESSURES (PSF)			
ZONE	MAXIMUM POSITIVE WIND PRESSURE	MINIMUM POSITIVE WIND PRESSURE	WIND-INDUCED WIND PRESSURE
1	15.6	15.6	15.6
2	15.6	15.6	15.6

COMPONENT AND CLADDING WIND LOADING
DIAGRAM 2
NTS



NOTE: DIAPHRAGM LOADS ARE DUE TO SEISMIC & WIND EFFECTS AND ARE REVERSIBLE

ROOF DIAPHRAGM LOADING
DIAGRAM 3
NTS



VERTICAL SEISMIC LOADING
DIAGRAM 4
NTS

NOT IN CONTRACT

NO.	DATE	DRWN	CHKD	REMARKS
1	3/20	EDM	ASB	REVISED FOR BID CHANGES
2	3/20	EDM	ASB	REVISED FOR BID CHANGES
3	3/20	EDM	ASB	REVISED FOR BID CHANGES
4	3/20	EDM	ASB	REVISED FOR BID CHANGES

DESIGNED BY: B. J. SMITH	CHECKED BY: P. COUSINS
APPROVED BY: J. BODDIS	DATE: APRIL 2018

CDM Smith
Civil & Mechanical Engineers
11111 Highway 100, Suite 1102
Franklin, TN 37069
Phone: 615.791.1102
Fax: 615.791.1102

CITY OF FRANKLIN, TENNESSEE
FRANKLIN WRF
MODIFICATIONS AND EXPANSION PROJECT
COF CONTRACT NO. 2017-0264

ALTERNATE ELECTRICAL BUILDING
ROOF PLAN AND SECTION
S-39

PROJECT NO. 14815-0004-000
FILE NAME: S-39.DWG
SHEET NO. S-39

CONFORMED DRAWING - AUGUST 2018

NOT IN CONTRACT^A

PROJECT NO. 14115-14584-1100	PROJECT NAME: SAGEBROOK	SHEET NO.
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		
		

CONFORMED DRAWING - AUGUST 2018



Kiewit

Kiewit Infrastructure South Co.
4405 International Blvd., NW, Suite C-101
Norcross, GA 30093

April 26, 2019

To: Attn: Mr. Dan Harris

GC-KIEWIT-00012.00

CDM Smith, Inc.
210 25th Avenue North
Suite 1102
Nashville, TN 37203

Reference: Franklin WRF Modifications & Expansion Project
COF Contract No. 2017-0264

Subject: CCA-004 Electrical Building

Dear Mr. Harris,

Kiewit has received **Construction Change Authorization (CCA) 004** regarding the **Electrical Building sheets S-38A, S-38, S-39, S-40, and S-41**. Upon further evaluation of this CCA, Kiewit has determined that the changes identified in this CCA will result in **no cost or schedule impact** to the above referenced contract.

If you have any questions, please do not hesitate to contact me at (678) 794-2121.

Sincerely,

Steve Davis
Project Manager

cc: File
Michelle Hatcher

CONSTRUCTION CHANGE AUTHORIZATION

TO: Mr. Steve Davis
Project Manager
Kiewit Water Facilities South
4405 International Blvd., NW,
Suite C-101
Norcross, Georgia 30093
(770) 940-8044

FROM: CDM Smith
Parkview Towers
210 25th Ave. N., Suite 1102
Nashville, TN 37203
(615)-771-2466

DATE: March 18, 2019

PROJECT: City of Franklin, Tennessee
Franklin WRF Modifications & Expansion Project

CCA NUMBER: 005 **CDM SMITH PROJ. NO.:** 14915-231666

SUBJECT: Bid Alternate D **CITY PROJECT NO.:** 2017-0264

REFERENCE: N/A

DESCRIPTION: City of Franklin accepts Contractor proposal dated January 18, 2019 to construct landscaping berms with excess fill material in lieu of removing materials from the site in exchange for proposed credit of (\$80,000.00)

ATTACHMENTS: Kiewit Proposal Letter dated 18 Jan 2019

CDM SMITH:

By: 
Date: 3/18/19

CONTRACTOR:

By: 
Date: April 2, 2019

City of Franklin:

By: 
Date: 3/18/19



Kiewit

Kiewit Infrastructure South Co.
4405 International Blvd., NW, Suite C-101
Norcross, GA 30093

January 18, 2019

To: Attn: Mr. Dan Harris

LET-KIEWIT-00006.00

CDM Smith, Inc.
210 25th Avenue North
Suite 1102
Nashville, TN 37203

Reference: Franklin WRF Modifications & Expansion Project
COF Contract No. 2017-0264

Subject: Proposal for Construction of Landscaping Berms

Dear Mr. Harris,

The following proposal is in reference to the construction of the landscape berms which were provided for in the Franklin WRF Modifications & Expansion Project Bid Documents and specifically on the Bid Form as Deductive Alternate D - Construct Berms Instead of Hauling Excess Material.

As previously mentioned, Kiewit included the construction of the landscaping berms in the base bid, in lieu of hauling excess material off site, to lower the pricing for the project. By allowing Kiewit to proceed with construction of the landscaping berms, with on-site excess material, in accordance with the Bid Documents, Kiewit hereby offers a credit of Eighty Thousand Dollars (\$80,000.00) for consideration by the City of Franklin.

Kiewit greatly appreciates the consideration of this proposal with hopes it will be found acceptable.

If you have any questions, please do not hesitate to contact me at (678) 794-2121.

Sincerely,

Steve Davis
Project Manager

cc: File
Michelle Hatcher



Kiewit

Kiewit Infrastructure South Co.
4405 International Blvd., NW, Suite C-101
Norcross, GA 30093

January 18, 2019

To: Attn: Mr. Dan Harris

LET-KIEWIT-00006.00

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Sincerely,

Steve Davis
Project Manager

cc: File
Michelle Hatcher

CONSTRUCTION CHANGE AUTHORIZATION

TO: Mr. Steve Davis
Project Manager
Kiewit Water Facilities South
4405 International Blvd., NW,
Suite C-101
Norcross, Georgia 30093
(770) 940-8044

FROM: CDM Smith
210 25th Ave. N.
Suite 1102
Nashville, TN 37203
(615) 320-3161

DATE: July 18, 2019

PROJECT: City of Franklin, Tennessee
Franklin WRF Modifications & Expansion Project

CCA NUMBER: 014 **CDM SMITH PROJ. NO.:** 14915-231666

SUBJECT: Grit Classification Equipment **CITY PROJECT NO.:** 2017-0264

REFERENCE: (See Below)

DESCRIPTION: Provide battery powered auto-lubrication equipment for grit classifiers per the Engineer's comments to submittal D-11325-001-B and a credit of (\$5,031) per Change Proposal No. 7 dated June 21, 2019.

CDM SMITH:

By: _____

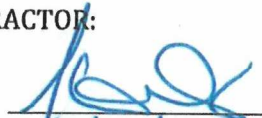
Date: _____


8/13/19

CONTRACTOR:

By: _____

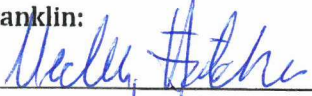
Date: _____


8/12/2019

City of Franklin:

By: _____

Date: _____


8/13/19



Kiewit

Kiewit Infrastructure South Co.
4405 International Blvd., NW, Suite C-101
Norcross, GA 30093

June 21, 2019

To: Attn: Mr. Dan Harris

CP-KIEWIT-00002.01

CDM Smith, Inc.
210 25th Avenue North
Suite 1102
Nashville, TN 37203

Reference: Franklin WRF Modifications & Expansion Project
COF Contract No. 2017-0264

Subject: Revised Change Proposal - Grit Classification Equipment – Lubricator - Submittal D-11325-001-B
Reviewer Comments

Dear Mr. Harris,

In response to comment one of D-11325-001-B Reviewer Comments on Grit Classification Equipment submittal, Kiewit hereby proposes to perform the following lump sum revisions to the Work as described in the attached proposals dated June 7, 2019 from Envirodyne Systems Inc. and May 22, 2019 from Wayne J. Griffin Electric, Inc. (WJGEI) for a total credit of **Five Thousand Thirty-One Dollars and Zero Cents (\$5,031.00)**.

This credit includes substituting Trico single point lubricators in lieu of electrically driven for the classification equipment as well as the deletion of conduit, wire and disconnects for three units and one future unit.

Kiewit has also included a wage burden rate breakdown from WJGEI in response to CDM Smith's letter dated June 3, 2019 regarding CCA No. 008 and WJGEI's labor rate.

If you have any questions, please do not hesitate to contact me at (678) 794-2121.

Sincerely,

Steve Davis
Project Manager

cc: File
Michelle Hatcher
Brian Goodwin



Parkview Towers
210 25th Avenue North, Suite 1102
Nashville, Tennessee 37203
tel: 615-771-2466
fax: 615-778-9733

June 5, 2019

Mr. Steve Davis
Kiewit Infrastructure South Co.
4405 International Blvd NW, Suite C-101
Norcross, GA 30093

Subject: Franklin WRF Expansion Project
Change Proposal (CP) No. 7 – Grit Classification Equipment

Dear Mr. Davis;

We have received CP 7 in response to the Engineer's comments to submittal D-11325-001-B and respond with the following comments;

1. The pdf markup from EnviroNyne Systems, Inc. indicating a proposed credit of (\$300) will not satisfy SRF documentation requirements. Please provide a proposal from the manufacturer indicating the actual "sell cost" of the originally specified equipment and that of the proposed new equipment.
2. Regarding labor rates for Wayne J. Griffin Electric, Inc., please refer to our June 3, 2019 letter in response to your proposal for Construction Change Authorization (CCA) No. 8.
3. The City has opted to keep the originally required MCC buckets for use as spares.

Please revise per the above, and feel free to contact me if you have questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'D. Harris'.

Daniel A. Harris, PMP, CCM, LEED GA
Project Manager
CDM Smith

cc: Brian Goodwin, City of Franklin



Grit Classification Lubricators



ISO 9001:2015 CERTIFIED

ENVIRODYNE SYSTEMS INC.

Custom Water & Wastewater Treatment Equipment - Since 1971

75 Zimmerman Drive Camp Hill, PA, USA 17011

Phone: (717) 763-0500 | Fax: (717) 763-9308 | www.envirodyne.com

June 7, 2019

Stephen Reid
KIEWIT WATER FACILITIES SOUTH CO.
135 Claude Yakes Dr.
Franklin, TN 37064

VIA EMAIL

Subject: Franklin, TN
Franklin WRF Modification & Expansion Project
Material Contract No. 103925-MC-029
Our Job No. 9234
CHANGE PROPOSAL (CP) NO. 7 - GRIT CLASSIFICATION EQPT.

Dear Mr. Reid:

Below is a credit proposal for the substitution of single point lubricators as opposed to electrically driven for the grit classification equipment (Section 11325). This is in response to submittal D-11325-001-B.

<i>Price of electrically driven lubricator</i>	<i>= \$440.00 x 3 units = \$1,320.00</i>
<i><u>Price of proposed single point lubricator</u></i>	<i><u>= \$170.00 x 3 units = \$ 510.00</u></i>
<i>Credit (price difference)</i>	<i>= \$270.00 x 3 units = \$ 810.00</i>

Envirodyne proposed credit = \$300 x 3 units = \$900.00 total.

Yours very truly,

ENVIRODYNE SYSTEMS INC.

Eric Bushey, P.E.
Vice President

EAB:syb



WAYNE J.
GRIFFIN ELECTRIC
INC.

May 22, 2019

VIA EMAIL ONLY: Steven.Davis1@kiewit.com

Mr. Steven Davis, Project Manager
Kiewit
135 Claude Yates Drive
Franklin, TN 37064

RE: Job #6198 - Franklin WRF Mods and Exp., Franklin, TN
Proposal #5

Dear Mr. Davis:

Wayne J. Griffin Electric, Inc. ("WJGEI") proposes to modify our contract to perform the following lump sum revisions to our work per our enclosed detailed backup:

DESCRIPTION OF WORK:

This credit is to delete the Auto Lube Pumps for the Grit Classification Equipment. The credit includes the deletion of four (4) MCC Buckets and the conduit, wire, and disconnects for the three (3) pumps and one (1) Future.

Material	\$	(4,018.75)	(1,944.75)
Labor		(2,037.07)	
Total	\$	(6,055.82)	(3,981.82)

This is a lump sum forward looking estimate of the above-noted change to our scope of work. This estimate represents a price we are willing to accept to assume the cost risk of this change to our ongoing work given the information provided to us. The labor and material prices contained in this proposal are based upon vendor/subcontractor quotes (if noted) and/or electrical industry pricing guides such as NECA, Trade Service, or R.S. Means, which guides are widely used and accepted in the construction industry to facilitate timely and consistent change order pricing. This estimate is offered for your review, approval and acceptance.

Corporate Headquarters:

116 Hopping Brook Road
Holliston, MA 01746
Phone: (508) 429-8830
Fax: (508) 429-7825

Regional Offices:

296 Cahaba Valley Parkway
Pelham, AL 35124
Phone: (205) 733-8848
Fax: (205) 733-8107

1950 Evergreen Boulevard
Suite 300
Duluth, GA 30096
Phone: (678) 417-9377
Fax: (678) 417-9373

2310 Presidential Drive
Suite 101
Durham, NC 27703
Phone: (919) 627-9724
Fax: (919) 627-9727

9801-C Southern Pine Boulevard
Charlotte, NC 28273
Phone: (704) 522-3851
Fax: (704) 522-3856

The value included in this proposal does not include any amounts for extended contract duration, overtime, changes in the sequence of work, acceleration, disruptions, interference and/or impacts, and the right is expressly reserved to recover any and all of these related items prior to any final settlement of this contract. The working relationship between your company and ours shall be in accordance with our mutually agreed to contract form.

Wayne J. Griffin Electric, Inc. reserves the right to void this proposal after thirty (30) days from the date above.

If you have any questions regarding the above, please do not hesitate to contact me at (205) 733-8848 ext. 6175, or troberson@wjgei.com.

Very truly yours,

WAYNE J. GRIFFIN ELECTRIC, INC.



Timothy R. Roberson
Project Manager

TRR/kam

ACKNOWLEDGMENT: The contract modifications stated for the above proposal are acceptable for the work to be performed. The value of the work completed to the date of the next requisition may be billed on that requisition.

Date: _____ Authorized Signature: _____

cc: Corbin Coker, Engineer, Kiewit, Corbin.Coker@Kiewit.com
Calvin Mize, Regional Manager, Wayne J. Griffin Electric, Inc.
Sarah Moore, Project Engineer, Wayne J. Griffin Electric, Inc.



116 Hopping Brook Road, Holliston, MA 01746
(508) 429-8830 FAX (508) 429-9251

CCN#: P-0005, Credit for Grease Pumps in MCC 3 and
Date: 5/20/2019
Project Name: Franklin WRF Mods and Exp
Project Number: 06198-00-18
Page Number: 1

Work Description

This credit is to delete the Auto Lube Pumps for the Grit Classification Equipment. The credit includes the deletion of 4 MCC Buckets and the Conduit, Wire, and disconnects for the (3) pumps and (1) Future.

Itemized Breakdown

Description	Qty	Net Price	UM	Materials (\$)	Labor	Total Hours
As Builts	0.00	0.0000	HRS	0.000	0.000	0.000
Cleanup	0.00	0.0000	HRS	0.000	0.000	0.000
Tools	0.00	0.0000	HRS	0.000	0.000	0.000
Field Safety/JHA	0.00	0.0000	HRS	0.000	0.000	0.000
Supervision	0.00	0.0000	HRS	0.000	0.000	0.000
Project Controls	0.00	0.0000	HRS	0.000	0.000	0.000
EATON CREDIT FOR AUTO LUBE BUCKETS	-1.00	2,074.0000	EO	-2,074.000	0.000	0.000
3/4" PVC SCHEDULE 40	-100.00	0.3103	FT	-31.030	0.045	-4.500
3/4" RIGID PVC COATED CONDUIT 40MIL	-10.00	7.1180	FT	-71.180	0.080	-0.800
3/4" ALUMINUM CONDUIT	-15.00	4.3407	FT	-65.110	0.055	-0.825
3/4" PVC COUPLING SCHEDULE 40	-8.00	0.1538	EA	-1.230	0.160	-1.280
3/4" PVC FEMALE ADAPTER	-24.00	0.3058	EA	-7.340	0.160	-3.840
3/4" PVC/GRC COUP 40MIL	-6.00	5.2667	EA	-31.600	0.350	-2.100
3/4" LIQUIDTITE CONDUIT	-9.00	3.0800	FT	-27.720	0.050	-0.450
3/4" LIQUID TIGHT STEEL STRAIGHT CONNECTOR	-6.00	2.9950	EA	-17.970	0.180	-1.080
#12 XHHW COPPER WIRE	-600.00	0.1884	FT	-113.040	0.007	-4.200
30A 600V 3P NF NEMA 4X	-3.00	475.3000	EA	-1,425.900	2.000	-6.000
3/4" SEALING FITTING FEM HUB	-6.00	25.4383	EA	-152.630	0.600	-3.600
Totals				-4,018.75		-28.68
Tax				0.00		
Materials with				-4,018.75		

Summary

	Itemized Breakdown Total		-4,018.75	-1,944.75
Elect. Journeyman	(-28.6750 hrs @ \$71.04 / hr)	-2,037.07		
			-2,037.07	
Total			-\$6,055.82	-3,981.82

Timothy Roberson

From: David Collis <dcollis@inlineelectric.com>
Sent: Friday, May 17, 2019 11:26 AM
To: Timothy Roberson
Subject: FW: lvmcc c/n for deletion of starter buckets FW: [EXTERNAL] 6198 - Credit proposal for Auto Lubricator Pumps in MCC-3/4 - GO# MNV0009366 (VISTA Change Notice Request)

Importance: High

Note: This email originated outside Wayne J. Griffin Electric. Use caution with replies, links and attachments. Please forward any suspicious looking email to spamcatcher@wjgei.com.

David Collis

Inline Electric Supply Co., Inc.

2600 2nd Ave South | Birmingham, AL 35233

Office: 205-322-2600 | Fax: 205-949-0786

Direct: 205-949-9231 | Cell: 256-318-0338

MCC Order Review and Change Notice Form

Note: Lead time impacts may apply

Date: 5/15/2019

GO Number: MNV0009366

Job Name:

Sales Contact



Powering Business Worldwide

Item Number (Enter Items)		Cost	Total
Sheet1	ITEM 029 MCC-3	\$ (1,037)	
Sheet2	ITEM 030 MCC-4	\$ (1,037)	
		\$ (2074)	

GO Number:
MNV0009366

5/15/2019

Item Number: ITEM 029 MCC-3

Issue #	Issue Description	Qty	List Price	Price Per Issue
1	UNITS 5K & 4J: DELETE S1 FVNR ("AUTO LUBRICATOR)	2		
Note: Lead time impacts may apply		Parts Total:		
		Eng & Shop Total:		
		TOTAL: -\$1037		

GO Number: MNV0009366					5/15/2019
Item Number: ITEM 030 MCC-4					
Issue #	Issue Description	Qty	List Price	Price Per Issue	
1	UNITS 5C & 4F: DELETE S1 FVNR ("AUTO LUBRICATOR)	2			
Note: Lead time impacts may apply		Parts Total:			
		Eng & Shop Total:			
		TOTAL: -\$1037			

From: Timothy Roberson [<mailto:troberson@WJGEI.com>]

Sent: Monday, May 06, 2019 3:53 PM

To: Jackson, dave; Banner, Scott

Cc: McLeod, Russ C; David Collis

Subject: [EXTERNAL] 6198 - Credit proposal for Auto Lubricator Pumps in MCC-3/4

Dave

The engineers are asking for a credit proposal for the Auto Lubricator Pumps in MCC-3 and 4, because the pump manufacturer submitted some battery control pumps instead of what was shown in the drawings. I have highlighted the buckets in MCC-3 and 4 one lines. Could you please provide a credit price for deleting these (4) buckets?

Please give me a call if you have any questions. Also I don't know how likely this proposal is to be accepted, so no changes to the MCC's will be required unless this gets approved.

Thanks,

Timothy Roberson
Project Manager

Wayne J. Griffin Electric, Inc.
(774)-292-1614



This email has been checked for viruses by AVG antivirus software.
www.avg.com

Wayne J. Griffin Electric, Inc.
Hourly Rates (Confidential)
2018 Private Wage Burden Rate

Breakdown of Hourly Rates

Job Name: Franklin WRF Mods & Expansion - Franklin TN

Job Number: 6198

Workers Title: Blended

		Straight Time	1 1/2 Time	Double Time
Base Wage Rate		\$ 38.49	\$ 57.74	\$ 76.98
F.I.C.A.	7.65%	2.94	4.43	5.89
F.U.T.A.	0.60%	0.23	0.35	0.46
S.U.T.A.	0.01%	0.00	0.01	0.01
Worker's Comp Ins.	6.09%	2.34	2.34	2.34
Gen. Liability Ins.	1.00%	0.38	0.38	0.38
Health/Dental/Life Insurance	14.52%	5.59	5.59	5.59
Pension	3.00%	1.15	1.73	2.31
Performance Compensation	1.77%	0.68	1.02	1.36
Vacation Pay	6.36%	2.45	2.45	2.45
Sick Pay	2.12%	0.82	0.82	0.82
Holiday Pay	3.81%	1.47	1.47	1.47
Apprentice / Training	3.95%	1.52	1.52	1.52
Supplementary Health and Welfare Benefits	1.61%	0.62	0.62	0.62
Company Required Uniforms (Safety Program)	0.48%	0.18	0.18	0.18
IT/MIS Infrastructure	4.97%	1.91	1.91	1.91
Travel & Subsistence		10.25	10.25	10.25
Total		\$ 71.04	\$ 92.80	\$ 114.55

CONSTRUCTION CHANGE AUTHORIZATION

TO:	Mr. Steve Davis Project Manager Kiewit Water Facilities South 4405 International Blvd., NW, Suite C-101 Norcross, Georgia 30093 (770) 940-8044	FROM:	CDM Smith 210 25 th Ave. N. Suite 1102 Nashville, TN 37203 (615) 320-3161
DATE:	July 18, 2019		
PROJECT:	City of Franklin, Tennessee Franklin WRF Modifications & Expansion Project		
CCA NUMBER:	015	CDM SMITH PROJ. NO.:	14915-231666
SUBJECT:	Alum Tanks	CITY PROJECT NO.:	2017-0264
REFERENCE:	(See Below)		

DESCRIPTION: Provide single-wall polyethylene Alum Tanks in lieu of specified double-wall per the Engineer's response to Request for Information (RFI) No. 91 and a credit of (\$19,572) per Change Proposal (CP) No. 10 dated June 18, 2018.

CDM SMITH:

By: _____

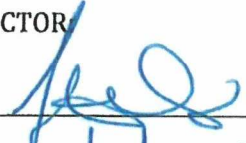
Date: _____


8/13/19

CONTRACTOR

By: _____

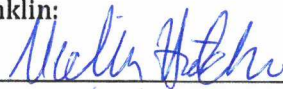
Date: _____


8/12/2019

City of Franklin:

By: _____

Date: _____


8/13/19



Kiewit

Kiewit Infrastructure South Co.
4405 International Blvd., NW, Suite C-101
Norcross, GA 30093

June 18, 2019

To: Attn: Mr. Dan Harris

CP-KIEWIT-00004.00

CDM Smith, Inc.
210 25th Avenue North
Suite 1102
Nashville, TN 37203

Reference: Franklin WRF Modifications & Expansion Project
COF Contract No. 2017-0264

Subject: Polyethylene Storage Tanks – Alum Feed and Storage

Dear Mr. Harris,

This letter is in response to RFI 91 to change the Polyethylene Storage Tanks from a double-wall tank to a single-wall tank to meet the specifications capacity of 9,100 gal. The largest double-wall tank made by PolyProcessing has a capacity of 8,700 gal, which does not meet the specifications for the tanks. After email correspondence with CDM Smith, it was suggested to change to the single-wall tanks to meet the specified capacity. The single-wall tank is manufactured and shipped from French Camp, CA despite being original shipped from Monroe, LA, where the double-wall tank is manufactured and shipped. The increase in cost can shown on the cost breakdown in this credit proposal for the change in freight.

Kiewit is submitting the attached credit proposal for the changing from a Double-Wall Polyethylene Storage Tank to a Single-Wall Storage Tank in the amount of **Nineteen Thousand Five Hundred Seventy-Two Dollars and Zero Cents (\$19,572.00)**.

If you have any questions, please do not hesitate to contact me at (678) 794-2121.

Sincerely,

Steve Davis
Project Manager

cc: File
Michelle Hatcher

Carl Eric Johnson, Inc.
1725 Q MacLeod Drive
Lawrenceville, GA 30043
(678) 377-3100
(678) 377-2021 -fax

Sales Order

Page: 1



Sales Order 0050760

Order Date 3/11/2019

Salesperson AT1

Customer 0491105

Confirm To: STEVE DAVIS- KIEWIT

Cust Fax:

STEVEN.DAVIS1@KIEWIT.COM

Sold To:

KIEWIT INFRASTRUCTURE SOUTH CO
4405 INTERNATIONAL BLVD
SUITE C-101
NORCROSS, GA 30093

Ship To:

KIEWIT C/O CITY OF FRANKLIN, TN
WRF MOD & EXPAN PRJ
135 CLAUDE YATES DRIVE
TAG: JOB NO 103925
FRANKLIN, TN 37064

Customer P.O.		Ship VIA	F.O.B.	Terms	
103925-MC-035		OTHER PPD/ADD	FACTORY	Net 30	
Item Number	Item Description	Ordered	Price	Amount	
ZPOLY	POLYPROCESSING	1	12,930.30	12,930.30	
	10% WITH SUBMITAL APPROVAL				
ZPOLY	POLYPROCESSING	3	38,790.90	116,372.70	
	POLY PROCESSING 9100 GAL VERT PER CEJ REVISED QUOTATION # 066214-DER-18 RE-BID				
ZCJSF	FIELD SERVICE	1	650.00	650.00	
	FIELD SERVICE FOR INSPECTION, STARTUP AND TRAINING (1 DAY)				

POINT OF CONTACT: STEVE DAVIS - PROJECT MANAGER: 678-794-2121, steven.davis1@kiewit.com

PAY TERMS: NET 30 WITH EACH MILESTONE: 10% WITH SUBMITTAL APPROVAL/ RELEASE FOR FABRICATION/
BALANCE LESS RETENSION DUE NET 30 ON SHIPMENT; 5% RETAINAGE PERMITTED FOR START-UP, BUT NTE
NET 90.

****NOTE: RELEASE OF LIEN FORM REQUIRED WITH ALL INVOICES****

REFERENCE CEJ JOB # PPC 428

*** ORDER ACKNOWLEDGEMENT ***

PLEASE CONTACT US WITH ANY DISCREPANCIES ASAP

Net Order:	129,953.00
Freight:	24,500.00
Sales Tax:	0.00
Order Total:	154,453.00

**CARL ERIC JOHNSON, INC**

1725 Q Macleod Drive,
Lawrenceville, GA 30043

Phone: 678-377-3100

Fax: 678-377-2021

www.cejco.net



June 18, 2018

CEJ Quote 066214-DER-18 Re-Bid

Att: Estimators
All Bidding Contractors

Number of Pages: THREE

Sub: Franklin WRF Modifications & Expansion
Franklin, Williamson County, TN

BIDS: 06/18/18 @ 2:00 PM CST

Ref: Section 11244 Polyethylene Storage Tanks
Addendums 1 -11, Drawings M-41, M-42, I-56
Double Walled Safe Tanks® by Poly Processing

REVISION 1:

Revised to include deduct for
9100 Gallon tanks, 5 Year
Warranty, and to provide
For Final Bid Pricing

Dear Estimator:

In response to the subject specification section, we are pleased to provide the following quotation for Poly Processing's Cross-Link Polyethylene Safe Tank® Double Walled Containment Systems as specified.

As a true benefit, Poly Processing tanks are constructed of cross linked high-density polyethylene (XLHDPE), which has five times more impact and tensile strength than linear HDPE, thus providing a stronger tank, with a longer life span.

APPLICATION: Alum Storage Tank No. 1, 2, & 3 **QTY: (3)**
TANK TYPE: Safe Tank® Double Walled Containment System
CAPACITY: 8,700 Gallons
DIMENSIONS: 11'-11" Diameter X 14'-06" Height

Each tank will consist of the following:

COMPONENTS	QTY	DESCRIPTION
Primary Tank	1	8700 Safe-tank Inner, 1.6 Sg, XLHDPE, Natural Color
Containment	1	8700 Safe-tank Outer, 1.65 Sg, XLHDPE, Natural Color
Lid/Manway	1	24" Cover Assembly, 8-bolt
Fill	1	2" Universal Ball Dome, Bulkhead Fitting Style, pvc/epdm
Outlet/Drain	1	2" Bolted Flange fitting assy w/Bellows Style Flexi-Joint expansion transition fitting, 2x1-1/2 Bushing, pvc/ss/epdm/ptfe
Level Sensor	1	Ultrasonic Echotouch, and 4" Universal Ball Dome Flange Style fitting, pvc/ss/epdm
Float Switch Fitting	1	4" Universal Ball Dome Flange Style fitting, pvc/ss/epdm
Vent	1	6" U-Vent with Mesh Screen, pvc/pe
Level Gauge	1	Reverse Float Calibrated gauge, with 2" UBD fitting BHF Style, exterior and interior vertical pipe supports, gaskets, bolts, and reverse gallonage tape, pvc/epdm/pe
Heater System	1	Non-Hazardous, (8)sp420-16 (2) Control Boxes, Delta T = 100, 110 VAC, Outdoor

Insulation	1	2" Thick Polyfoam 650 with Mastic Coating
Ladder	1	12' FRP with Cage, 3'-6" Walk Thru, Platform, and Brackets
Restraint System	1	A6-10 SSMC Cables, Angles, and Anchor Rods, 316SS
Equalization (Tanks 1 & 3)	1	2" Bolted Flange fitting assembly, with (2) Bellows Style Flexi-Joint expansion joint transition fittings, pvc/ss/epdm/ptfe
Equalization (Tank 2)	2	2" Bolted Flange fitting assembly, with (3) Bellows Style Flexi-Joint expansion joint transition fittings, pvc/ss/epdm/ptfe
Restraint Calcs	1	Engineering Approval Stamp (with buoyancy)

SUMMARY:

Qty (3) Poly Processing Safe Tanks®, outlined per above, TOTAL PRICE \$ 163,943.00

Qty (3) Poly Processing Vertical 9,100 Gallon Tanks, TOTAL DEDUCT \$ 30,342.00
Tank spec implies Safe Tanks with transition fittings but tank dimensions match our 9,100 gallon tank. Includes fittings except transitional.

Estimated Freight, based on Qty (3) tanks above, to Franklin, TN ADD \$ 8,500.00 *
* Freight is estimated only. Actual freight charges will be invoiced at time of shipment.

Field Service, (1) Day as detailed herein, for Inspection, Startup and Training, ADD \$ 650.00 **

FIELD SERVICE:** Offered above is for one (1) day, or part thereof, for jobsite services consisting of installation inspection, field testing observation, start-up, and/or Owner personnel training. Please allow 10 days' notice to schedule field services. Additional days are \$650 per day.

COMMENTS, CLARIFICATIONS, AND/OR EXCEPTIONS:

Tank will include the following factory tests: 8-Hour Hydro, Visual, Impact, Gel, and actual Wall Thickness. Quality test report will also be provided along with Engineering Approval Stamp for Restraint Calculations with buoyancy.

2.03 A-a. 1 and 2: The tanks offer in our proposal are 8,700 gallon double walled tanks. The diameter is 11'-11" and the overall height is 14'-6".

2.04 A-3: Poly Processing is the only polyethylene tank manufacturer that can offer a double walled tank with bottom outlets that maintain complete containment integrity for the fitting and system containment. Poly Processing's Enhanced Bellow Transition outlet is the only outlet with a PTFE expansion joint built into the assembly.

2. 2.04 A.4(a): Poly Processing is the only tank manufacturer to off the PTFE Flexi-joint Expansion joint. The Flexi-Joint Expansion Joint will meet the exact specifications and requirements listed in this section.

2.04 A-6: Top mounted pump suction is not scheduled nor shown on the drawings thus is not included.

2.04 A-9: Identification label by contractor.

2.04 D: Precautionary Labels by contractor.

Page 3, Franklin WRF Modifications Re-Bid
Section 11244 Polyethylene Storage Tanks
Cross Link Double Walled Tank
CEJ Poly Processing Qt #066214-DER-18

3.01 A, B, D & D: Installation by contractor.

3.01 D: Poly Processing does not recommend that tanks be installed on felt, grout or any other means of tank leveling. The tanks should be installed on a flat level concrete pad, free of debris, protrusions and divots. The use of felt or grout can create unsupported pockets below the tank that will weaken the tank at those points. In addition, the restraint system will not work as designed if felt or grout is included.

3.03: Field testing by contractor.

Handling, Storage, Field Testing, and Installation shall be by others. Specifications and drawings not referenced herein, and anything exterior to the tank fittings, are not included in our scope of supply. User has certified chemical compatibility with all items.

WARRANTY: Poly Processing's standard 5-year warranty applies. Specification left open to interpretations in terms of liability.

Please note the following applies to this quotation:

Pricing does not include freight, taxes, permits, or bonds of any kind. Terms: TBD.
Shipped FOB factory, freight prepaid and added to the invoice unless otherwise requested.
Approval drawings 2 to 3 weeks after receipt of order acceptance by Carl Eric Johnson, Inc.
Shipment is 4 to 6 weeks after receipt of approved drawings and/or release to manufacture.

If this proposal should become an order, please address and forward to:

CARL ERIC JOHNSON, INC.
1725-Q MacLeod Drive
Lawrenceville, GA 30043
Fax 678-377-2021 or
email: croberts@cejco.net

If you have any questions or need additional information pertaining to this offering, please feel free to give me a call at 863-940-4832.

Thank you for your consideration of Poly Processing Safe Tanks® and Carl Eric Johnson. We look forward to the opportunity to work with you further on this project.

Regards,

Carolyn Roberts

Carolyn Roberts

Cc: J Hunt / G Cox / CEJ

CONSTRUCTION CHANGE AUTHORIZATION

TO: Mr. Steve Davis
Project Manager
Kiewit Water Facilities South
4405 International Blvd., NW,
Suite C-101
Norcross, Georgia 30093
(770) 940-8044

FROM: CDM Smith
210 25th Ave. N.
Suite 1102
Nashville, TN 37203
(615) 320-3161

DATE: July 18, 2019

PROJECT: City of Franklin, Tennessee
Franklin WRF Modifications & Expansion Project

CCA NUMBER: 016 **CDM SMITH PROJ. NO.:** 14915-231666

SUBJECT: Mixing Valve **CITY PROJECT NO.:** 2017-0264

REFERENCE: (See Below)

DESCRIPTION: Delete redundant mixing valve SP-MXV-1 per the Engineer's comments to submittal 15450-002-A for a credit of (\$4,426) per Kiewit proposal dated July 18, 2019.

CDM SMITH:

By: 

Date: 8/13/19

CONTRACTOR:

By: 

Date: 8/12/2019

City of Franklin

By: 

Date: 8/13/19



Kiewit

Kiewit Infrastructure South Co.
4405 International Blvd., NW, Suite C-101
Norcross, GA 30093

May 30, 2019

To: Attn: Mr. Dan Harris

CP-KIEWIT-00003.00

CDM Smith, Inc.
210 25th Avenue North
Suite 1102
Nashville, TN 37203

Reference: Franklin WRF Modifications & Expansion Project
COF Contract No. 2017-0264

Subject: Change Proposal No. 03 – Mixing Valve SP-MXV-1 - Submittal D-15450-002-A Reviewer Comments

Dear Mr. Harris,

In response to comment No. 12 of D-15450-002-A Reviewer Comments on the plumbing equipment submittal, Kiewit hereby proposes to perform the following lump sum revisions to the Work as described in the attached proposal dated February 27, 2019 from John Bouchard & Sons Co. for a total credit of **Three Thousand Six Hundred Ninety-Four Dollars and Zero Cents (\$3,694.00)**.

This credit includes elimination of the Eliminate SP-MXV-1 domestic water mixing valve and cabinet, elimination of piping, valves, and fittings associated with SP-MXV-1, as detailed on P-16, continue with 1-1/2" HW piping out of SP-GWH-1 and directly through system as shown on PD-1, Detail H.

If you have any questions, please do not hesitate to contact me at (678) 794-2121.

Sincerely,

Steve Davis
Project Manager

cc: File
Michelle Hatcher
Brian Goodwin

PCO NO.: CP No. 03 SP-MXV-1 mixing valve and associated piping

PREPARED BY: Steve Davis

DESCRIPTION	QTY	UNIT	MH Per Unit	Total MH	DIRECT LABOR		INDIRECT LABOR		MATERIAL		EQUIPMENT		SUBCONTRACT		OTHER		TOTAL AMOUNT
					Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost	Unit Cost	Total Cost			
Elimination of SP-MXV-1 mixing valve and associated piping in Solids Processing Building in accordance with review comments in submittal D-15450-002-A																	
	1.0	LS															
OTHER																	
STS - small tools, consumables, safety equip., (5% of direct labor, plus 6% sales tax: Formula = Total Direct Labor Subtotal * .05 + 1.0975)																	
TAX: (8.75% of Material, Equipment, Other)																	
BOND (2% of total)																	
SUBTOTALS																	
MARKUP %																	
SUBTOTALS WITH MARKUPS APPLIED																	
BOND																	
TOTAL																	



JOHN BOUCHARD & SONS CO.
1024 Harrison Street
Nashville, TN 37203
615-256-0112

February 27, 2019

Mr. Andy McMillen
Kiewit Water Facilities South Co.
135 Claude Yates Drive
Franklin, TN 37064

RE: Change Order #1: Credit Proposal to Eliminate SP-MXV-1

Dear Mr. McMillen,

Pursuant to CDM Smith's request on submittal response D-15450-002-A, plumbing comment #12, we have prepared this credit proposal for eliminating the SP-MXV-1 mixing valve from the Solids Processing Building associated with the GWH-1 water heater:

Plumbing Scope Elimination:

- Eliminate SP-MXV-1 domestic water mixing valve and cabinet.
- Eliminate piping, valves, and fittings associated with SP-MXV-1, as detailed on P-16.
- Continue with 1-1/2" HW piping out of SP-GWH-1 and directly through system as shown on PD-1, Detail H.

Credit Proposal for Deletion of SP-MXV-1 \$ 3,518.00

Details of Credit:

JBS SP - MXV - 1 Credit Proposal			
Qty	Material	Price Per	Total
15	1.5" sch80 CPVC pipe	\$2.65	\$39.75
3	1.5" valves - Apollo 77CLF	\$83.00	\$249.00
3	1.5" sch80 CPVC 90s	\$5.00	\$15.00
1	1.5 sch80 CPVC Tee	\$12.50	\$12.50
9	1.5" sch80 CPVC male adapters	\$5.70	\$51.30
1	SP-MXV-1	\$3,000.00	\$3,000.00
	Labor for Installation		\$150.00
Total Credit			\$3,517.55

Accepted On: _____ 2019

By: _____
SIGNATURE

Print Name: _____

JOHN BOUCHARD & SONS CO.

BY: David Proctor IV
SIGNATURE

Print Name David Proctor



SHOP DRAWING REVIEW COMMENTS

City of Franklin
Water Reclamation Facility Modifications & Expansion
COF Project No. 2017-0264

Submittal No: D-15450-002-A
Title: Product Data for Plumbing Equipment
Reviewer: Paul Pouliot (Plumbing) and John Sanchez (Electrical)

This submittal is being returned with a review code of: **APPROVED AS NOTED/ RESUBMIT**

Plumbing Comments:

1. Contractor shall confirm all quantities and sizes.
2. Note that wash hose stations and caution signs are shown on the Process Mechanical (M) drawings and will be provided by others. Engineer acknowledges that these items are not in the Plumbing Contractor's scope of work.
3. Engineer acknowledges that water hammer arrestors will be submitted under a separate heading.
4. Confirm that pressure gauge ranges will be selected so that the expected normal pressure will be read at or slightly above the mid-point of the range as specified (15450 2.08.D).
5. Confirm that pressure gauges will be provided with a stop cock or ball valve as specified (2.08.E).
6. Confirm that all tank type water heaters (electric and gas) will be provided with heat traps and auxiliary drain pans per Details A/P-12 and H/PD-1.
7. Method of sizing for hot water heater expansion tanks is for residential/domestic applications only and is not acceptable. Expansion tanks shall be sized based on the total volume of hot water in the system, including the water heater and hot/tempered/tepid water piping as applicable to each system.
8. Provide data sheet for proposed stand for water heater AL-EWH-1.
9. Building gas pressure for the Solids Processing Building and Digester Building is 3 PSI. Contractor shall provide additional regulator at all gas fired water heaters per Detail H/PD-1 to reduce pressure from 3 PSI to the 14-inches water column required inlet pressure for the gas fired water heaters. Refer to the Natural Gas Riser Diagram 1 on Sheet H-13 for additional information.

10. Confirm that all gas fired water heaters will be provided with vertical/through-the-roof terminations as shown on Sheets P-8 (Solids Processing Building) and P-11 (Digester Building), and Detail H/PD-1. Cross-out sidewall termination included in the submittal.
11. Maintain a minimum 10-foot clearance from the gas fired water heater vent terminations and the air intake hoods for the roof mounted make up air units at the Solids Processing Building (Refer to Sheet H-13 for locations), and the Digester Building (Refer to Sheet H-14 for locations) as shown on Note 7 on Sheet P-8 (Solids Processing Building) and Note 6 on Sheet P-11 (Digester Building).
12. Domestic water mixing valve SP-MXV-1 is not required. Provide credit proposal for eliminating mixing valve and associated piping.
13. Confirm that check valves will be provided in the recirculation piping downstream of the recirculation pumps in lieu of integral flow checks.
14. Confirm that 3-valve full size bypass will be provided around each recirculation pump as specified.
15. Proposed recirculation pump for SP-RP-3 is acceptable.
16. Coordinate installation of the deck mounted emergency eyewash with the Laboratory casework supplier.
17. Provide green color for the powder coated finish on the emergency shower/eyewash units.
18. Corrosion resistant powder coating shall be provided on all freeze-proof emergency shower/eyewash units (FP-ES/EW) as specified. Engineer has confirmed with Haws that this is available as a custom option to the specified unit.
19. Proposed method of heat tracing tepid water piping to the FP-ES/EW units is acceptable to the Engineer. Confirm that heat tracing will be provided on any exposed exterior tepid water recirculation piping in addition to any exposed exterior tepid water piping.
20. Proposed top inlet FP-ES/EW units are acceptable to the Engineer for the units located at the exterior west wall of the Solids Processing Building.
21. Confirm that all emergency fixtures will be provided with emergency identification signs as specified.
22. Confirm that the backflow preventer models submitted meet the approval of the authority having jurisdiction as specified. Provide a copy of the authority's "acceptable device list" or written approval.

Electrical Comments:

1. The electrical data sheets are missing for Gas Water Heater SP-GWH-1, SP-GWH-2, SP-GWH-3, and DB-GWH-1. Submit the electrical data.
2. For Sump Pump SP-SP-1, all data for the control panel is missing. Submit complete master power and control wiring diagrams, elementary or control schematics, suitable outlining drawings of the control schematics and suitable outline drawings of the control panel (interior and exterior). Include bill of materials and product data sheets for all control panel components. The completed control panel shall be UL certified per Section 16000 and have a minimum overall short-circuit withstand rating of 65,000 amperes RMS symmetrical at 480 volts, 3-phase per Section 16191, Paragraph 2.03.B.31.

General Comments:

1. Provide AIS certification for the Leonard cabinet assembly.

End of Comments

SHOP DRAWING REVIEW

ENGINEER'S REVIEW	RESPONSE REQUIRED OF CONTRACTOR
☐ Approved ☐ Comments Attached ☒ Approved as Noted ☐ Not Approved	☐ Confirm ☒ Resubmit
☐ Receipt Acknowledged (Not subject to Engineer's Review or Approval)	

The Engineer's review of this shop drawing is limited to the review of dimensions, equipment and materials as presented in the Contract plans, specifications, and for design concept. This review does not relieve the Contractor from errors or omissions in the submittal or from the Contractor's responsibility of addressing any deviations from the Contract Documents. The Contractor is responsible for the details and dimensions of fabrication and manufacture, the means, methods, techniques, sequences or procedures of construction and performing its work in a safe manner.

CDM Smith By Jon Allen Date 2/21/2019

CHANGE ORDER NO.: 1

Owner: City of Franklin, TN Date Issued: 10/4/2019
 Engineer: Civil & Environmental Consultants, Inc.
 Contractor: Civil Constructors
 Project Name: Henpeck Lane Interceptor Project
 Owners Contract No.: COF 2019-0093
 Effective Date of Change Order: 11/12/2019

The Contract is modified as follows upon execution of this Change Order:

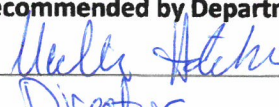
Description:

Work Change Directive #1 – Substitution of surge stone in place of machined rip rap (Class A-3) for the installation of the construction entrances throughout the job.
Work Change Directive #2 – Substitution of non-wire backed silt fence and filter sock in place of wire backed silt fence in certain areas.
Work Change Directive #3 – Additional time request for weather and delays related to permits for the 5-Mile Creek Crossing.
Work Change Directive #4 – Additional sanitary service laterals for 1268 Lewisburg Pike and 404 Ellington Drive.

Attachments:

Work Change Directive #1
Work Change Directive #2
Work Change Directive #3
Work Change Directive #4

Change in Contract Price	Change in Contract Times [State Contract Times as number of days]
Original Contract Price: \$ 3,203,238.00	Original Contract Times: Substantial Completion: June 2, 2020 Ready for final payment: July 2, 2020
[Increase] [Decrease] from previously approved Change Orders No. 1 to No. 1 \$ 0	[Increase] [Decrease] from previously approved Change Orders No.1 to No. 1: 0 days Substantial Completion: June 2, 2020 Ready for final payment: July 2, 2020
Contract Price prior to this Change Order: \$ 3,203,238.00	Contract Times prior to this Change Order: Substantial Completion: June 2, 2020 Ready for final payment: July 2, 2020
[Increase] [Decrease] this Change Order: \$ 0	[Increase] [Decrease] this Change Order: 16 days Substantial Completion: June 18, 2020 Ready for final payment: July 18, 2020
Contract Price incorporating this Change Order: \$ 3,203,238.00	Contract Times with all approved Change Orders: Substantial Completion: June 18, 2020 Ready for final payment: July 18, 2020

Recommended by Engineer
 By: Eric Gardner  Title: Senior Project Manager
 Recommended by Department Director
 By:  Title: Director

Date: 10/4/19

Date:

10/4/19

Recommended by City Project Manager

Authorized by Owner

By: Patricia McNeer

By:

Title: Utilities Engineer II

Title Mayor, City of Franklin, TN

Date: 10/16/19

Date:

MODIFIED - EJCDC® C-941, Change Order.

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EJCDC - 00941

Page 2 of 2

WORK CHANGE DIRECTIVE NO.: 1

Owner: **City of Franklin, TN** Date Issued: **7/3/2019**
Engineer: **Civil & Environmental Consultants, Inc.**
Contractor: **Civil Constructors**
Project Name: **Henpeck Lane Interceptor Project**
Owners Contract No.: **COF 2019-0093**
Effective Date of Work Change Order: **6/7/2019**

Contractor is directed to proceed promptly with the following change(s):

Description:

The contractor may substitute surge stone in place of Machined Rip Rap (Class A-3) for the installation of the construction entrances throughout the job.

Attachments:

RFI #1 Response 060719 and RFI #1 Cost Difference

Purpose for the Work Change Directive:

The contractor requested the substitution as it allows for a more manageable and accessible construction entrance using the surge stone in place of the Class A-3 rip rap.

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

☐ Non-agreement on pricing of proposed change. ☒ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price:	<u>\$6,756.00</u>	DECREASE
Contract Time:	<u>0</u> days	DECREASE

Basis of estimated change in Contract Price:

☒ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

Recommended by Engineer
By: Eric Gardner 
Title: Senior Project Manager
Date: 7/3/19

Authorized by Owner

Utilities Project Manager
7/8/19

WORK CHANGE DIRECTIVE NO.: 2

Owner: City of Franklin, TN Date Issued: 7/5/2019
Engineer: Civil & Environmental Consultants, Inc.
Contractor: Civil Constructors
Project Name: Henpeck Lane Interceptor Project
Owners Contract No.: COF 2019-0093
Effective Date of Work Change Order: 7/1/2019

Contractor is directed to proceed promptly with the following change(s):

Description:

The contractor may use non-wire backed silt fence between Manholes 17-26, Terra Tex silt fence throughout the project and Filtrexx 8" filter sock in lieu of silt fence.

Attachments:

RFI #11

Purpose for the Work Change Directive:

The substitution provides a cost savings. The filter sock is also easy to work with in areas near the creek crossings where it may be removed and reset from time to time to allow access.

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

☐ Non-agreement on pricing of proposed change. ☒ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: \$2.04/LF for non-wire and \$1.75/LF for filter sock DECREASE

Contract Time: 0 Days DECREASE

Basis of estimated change in Contract Price:

☐ Lump Sum ☒ Unit Price ☐ Cost of the Work ☐ Other

Recommended by Engineer

Authorized by Owner

By: Eric Gardner



Title: Senior Project Manager



Date: 7/5/19

7/18/19

WORK CHANGE DIRECTIVE NO.: 3

Owner: **City of Franklin, TN** Date Issued: **8/29/2019**
Engineer: **Civil & Environmental Consultants, Inc.**
Contractor: **Civil Constructors**
Project Name: **Henpeck Lane Interceptor Project**
Owners Contract No.: **COF 2019-0093**
Effective Date of Work Change Order: **8/27/2019**

Contractor is directed to proceed promptly with the following change(s):

Description:

Request from Contractor to add fifteen (15) days related to the delay of crossing 5-Mile Creek due to the tree removal associated with the USACE Permit and one (1) day for adverse weather in July.

Attachments:

Change Proposal Request #1
Change Proposal Request #2

Purpose for the Work Change Directive:

Add time to the construction contract due to delays beyond the contractor's control.

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

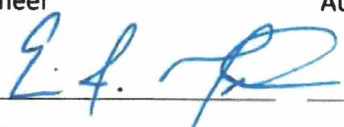
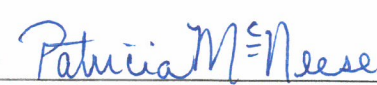
☐ Non-agreement on pricing of proposed change. ☒ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: \$0.00 **DECREASE**
Contract Time: 16 days **[SELECT ONE]**

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

	Recommended by Engineer	Authorized by Owner
By:	Eric Gardner 	Patricia McNeese 
Title:	Senior Project Manager	Utilities Engineer II
Date:	8/29/19	9/16/19

P.O. Box 685
Franklin, Tennessee 37065



Telephone (615) 236-9000
Fax (615) 236-9001

8/12/19

Eric Gardner, Senior Project Manager
Civil & Environmental Consultants, Inc.
117 Seaboard Lane, Suite E100
Franklin, TN 37067

Re:

Job Name: Henpeck Lane Interceptor Sewer
Description: Change Proposal #1.

Mr. Gardner,

Please accept this letter as Change Proposal #1 for the above referenced project. We are requesting 15 days related to delays to the critical path due to the tree removal associated with the Corp Permit.

For your consideration, please review the following:

- 1) During our internal review of the permits for the work, it was found that tree removal was not covered under the Corp permit. RFI #5 was submitted on 6/6/2019 requesting clarification. We received the response to RFI #5 and we were directed not to remove any trees at the creek. We received approval to remove the trees on 7/16/19. The schedule submitted 6/21/19 showed pipe installation from MH #1 to the Creek Crossing starting on 7/1/19. Since we were not able to remove the trees associated with the pipe installation, we are requesting days from 7/1/15 – 7/16/19 (15 days).

Should you have questions or require additional information, please contact me.

Best Regards,

A handwritten signature in blue ink that reads "Adam Charriere".

Adam, Charriere
Division Manager

P.O. Box 685
Franklin, Tennessee 37065



Telephone (615) 236-9000
Fax (615) 236-9001

8/12/19

Eric Gardner, Senior Project Manager
Civil & Environmental Consultants, Inc.
117 Seaboard Lane, Suite E100
Franklin, TN 37067

Re:

Job Name: Henpeck Lane Interceptor Sewer
Description: Change Proposal #2.

Mr. Gardner,

Please accept this letter as Change Proposal #2 for the above referenced project. We are requesting 2 days related to above average precipitation in July 2019.

For your consideration, please review the following:

- 1) According to the NOAA's Record of Climatological Observations based on readings from the Franklin Sewage Plan, we had 9 days where precipitation exceeded 0.10 – Inch during the month of July. We are also requesting (2) dry out days where the site was too wet from the previous rain event. This is (2) days above the foreseeable bad weather days for July listed in the contract documents. Please find the attached Data from NOAA for reference.

Should you have questions or require additional information, please contact me.

Best Regards,

A handwritten signature in blue ink that reads "Adam Charriere".

Adam, Charriere
Division Manager

Henpeck Sewer - Weather Tracking Summary

Number of Days With Percipitation >= .10 in Dry Out Days After Percipitation >= 1.0 in														
2019	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual	Project Total
Foreseeable Bad Weather Days	8	9	9	9	9	8	9	7	7	6	7	9	97	
Actual Bad Weather Days						7	11							
							2							2

Year	Month	Day	Temperature (F)			Precipitation					Evaporation		Soil Temperature (F)					
			24 Hrs. Ending at Observation Time		At Observation	24 Hour Amounts Ending at Observation Time				At Obs. Time	24 Hour Wind Movement (mi)	Amount of Evap. (in)	4 in. Depth			8 in. Depth		
			Max.	Min.		Rain, Melted Snow, Etc. (in)	Flag	Snow, Ice Pellets, Hail (in)	Flag				Ground Cover (see *)	Max.	Min.	Ground Cover (see *)	Max.	Min.
2019	07	01	92	70	71	0.00												
2019	07	02	91	71	71	0.00												
2019	07	03	92	71	73	0.00												
2019	07	04	90	70	70	0.00												
2019	07	05	90	70	70	0.22												
2019	07	06	88	70	70	0.41												
2019	07	07	90	70	73	1.04												
2019	07	08	90	72	72	0.30												
2019	07	09	93	71	72	0.00												
2019	07	10	93	71	72	0.00												
2019	07	11	93	72	74	0.08												
2019	07	12	91	72	72	0.00												
2019	07	13	89	72	74	0.00												
2019	07	14	94	74	74	0.00												
2019	07	15	89	69	71	0.06												
2019	07	16	83	71	75	0.04												
2019	07	17	88	75	75	0.16												
2019	07	18	88	72	72	0.13												
2019	07	19	88	71	71	0.23												
2019	07	20	92	71	75	0.00												
2019	07	21	92	71	73	0.27												
2019	07	22	93	70	77	0.00												
2019	07	23	87	66	67	1.19												
2019	07	24	79	60	60	0.00												
2019	07	25	82	57	58	0.00												
2019	07	26	84	58	61	0.00												
2019	07	27	89	61	65	0.00												
2019	07	28	89	65	66	0.00												
2019	07	29	90	66	66	0.00												
2019	07	30	90	66	72	0.00												
2019	07	31	88	68	68	0.00												
Summary			89	69		4.13		0.0										

Empty, or blank, cells indicate that a data observation was not reported.

*Ground Cover: 1=Grass; 2=Fallow; 3=Bare Ground; 4=Brome grass; 5=Sod; 6=Straw mulch; 7=Grass muck; 8=Bare muck; 0=Unknown

"s" This data value failed one of NCDC's quality control tests.

"T" values in the Precipitation or Snow category above indicate a "trace" value was recorded.

"A" values in the Precipitation Flag or the Snow Flag column indicate a multiday total, accumulated since last measurement, is being used.

Data value inconsistency may be present due to rounding calculations during the conversion process from SI metric units to standard imperial units.

WORK CHANGE DIRECTIVE NO.: 4

Owner: **City of Franklin, TN** Date Issued: **9/24/2019**
Engineer: **Civil & Environmental Consultants, Inc.**
Contractor: **Civil Constructors**
Project Name: **Henpeck Lane Interceptor Project**
Owners Contract No.: **COF 2019-0093**
Effective Date of Work Change Order: **9/24/2019**

Contractor is directed to proceed promptly with the following change(s):

Description:

The contractor shall install a service lateral for Tract I (approximately Station 31+60) and the McElroy property (approximately Station 6+90).

Attachments:

Henpeck Sewer – Tract I McElroy Sanitary Service

Purpose for the Work Change Directive:

The property owners for the two tracts requested approval for connection after the contract with Civil Constructors was awarded.

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

Notes to User—Check one or both of the following

☐ Non-agreement on pricing of proposed change. ☒ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: \$11,572.50 **INCREASE**

Contract Time: 0 Days **DECREASE**

Basis of estimated change in Contract Price:

☐ Lump Sum ☒ Unit Price ☐ Cost of the Work ☐ Other

Recommended by Engineer

By: Eric Gardner

Title: Senior Project Manager

Date: 9/24/19

Authorized by Owner

Patricia McNeese

Utilities Engineer II

9/24/19

P.O. Box 685
Franklin, Tennessee 37065



Telephone (615) 236-9000
Fax (615) 236-9001

CHANGE ORDER

PROJECT: Henpeck Sewer Interceptor CHANGE ORDER NUMBER 00001

CONTRACTOR: CIVIL CONSTRUCTORS LLC. DATE September 18, 2019
P. O. BOX 685
FRANKLIN, TN 37065

Addition / Deletion: Estimate for Tract I & McElroy Sewer Service

Item	Amount	Unit	Cost	EXTENDED TOTAL
Tract I				
(Item #29) 6" SDR 26 Gravity Sewer	45	LF	\$ 73.50	\$ 3,307.50
(Item #32) 6" SDR 26 Cleanout Assembly	1	EA	\$ 600.00	\$ 600.00
(Item #34) Lateral Service Connection - PVC	1	EA	\$ 1,250.00	\$ 1,250.00
(Item #8) Seeding	45	LF	\$ 1.50	\$ 67.50
McElroy Property				
(Item #30) 6" DIP CL 350 Gravity Sewer	15	LF	\$ 113.00	\$ 1,695.00
(Item #33) 6" DIP Cleanout Assembly	1	EA	\$ 1,670.00	\$ 1,670.00
(Item #35) Lateral Service Connection - DIP	1	EA	\$ 2,960.00	\$ 2,960.00
(Item #8) Seeding	15	LF	\$ 1.50	\$ 22.50
Total				\$ 11,572.50

OWNER:

The City of Franklin
109 Third Ave South
Franklin, TN 37064

SUB CONTRACTOR:

Civil Constructors LLC.
P. O. Box 685
Franklin, TN 37065

Signed by:

Date

Adam Charriere

Signed by:

September 18, 2019

Date

**AMENDMENT 1 TO
PROFESSIONAL SERVICES AGREEMENT
FOR SOUTH PRONG SANITARY SEWER
IMPROVEMENTS PROJECT
COF Contract No. 2013-0039**

THIS AMENDMENT is made and entered into on this the ____ day of _____, 20__, by and between the **City of Franklin, Tennessee** ("City") and **Hazen and Sawyer** ("Consultant").

WITNESSETH:

WHEREAS, City and Consultant entered into a Professional Services Agreement ("Agreement") entitled City of Franklin, Tennessee Professional Services Agreement, South Prong Sanitary Sewer Improvements Project (COF Contract No. 2013-0039), dated the 23rd day of April 2013, at a fee not to exceed **THREE HUNDRED THIRTY-SEVEN THOUSAND AND NO/100 DOLLARS** \$337,000.00; and

WHEREAS, the City realizes the need for additional engineering services for an expanded study area to address the growth and development in the area east of I-65 to Carothers Parkway; and

WHEREAS, the Consultant has presented to the City staff a Proposal with a summary of costs that breaks down the anticipated work effort as found in Exhibit A (attached and made a part hereto); and

WHEREAS, City staff feels the Values as presented in Exhibit A are appropriate for the anticipated work required as presented in the Amendment of the Agreement.

NOW, THEREFORE, in consideration of these premises and the mutual promises contained herein, it is agreed by and between the parties as follows:

1. The foregoing recitals are incorporated by reference as if fully stated herein.
2. Consultant's Responsibilities and Duties. The Consultant shall perform the work as proposed in the Scope as found in the October 16, 2019, letter of proposal (**Exhibit A**) which includes the Scope of Services for this Amendment. Exhibit A shall be considered as an integral part hereof.
3. City's Responsibilities and Duties. The City shall pay the Consultant in an amount not to exceed **TWO HUNDRED FIFTY-FIVE THOUSAND AND**

NO/100 DOLLARS (\$255,000.00) for the additional Services as described in Exhibit A.

The City reserves the right to issue any payments jointly to the Consultant and Sub-Consultant when the City receives information that the Consultant has not paid its Sub-Consultant.

4. Waiver. Neither party's failure nor delay to exercise any of its rights or powers under this Amendment will constitute or be deemed a waiver or forfeiture of those rights or powers. For a waiver of a right or power to be effective, it must be in writing signed by the waiving party. An effective waiver of a right or power shall not be construed as either (a) a future or continuing waiver of that same right or power, or (b) the waiver of any other right or power.

5. Severability. If any term or provision of the Amendment is held to be illegal or unenforceable, the validity or enforceability of the remainder of the Amendment will not be affected.

6. Precedence. In the event of conflict between this Amendment and the provisions of the previous Agreement(s), or any other contract, agreement or other document to which this Amendment may accompany or incorporate by reference, the provisions of this Amendment will, to the extent of such conflict (or to the extent the Agreement is silent), take precedence unless such document expressly states that it is amending this Amendment.

7. Entire Agreement. The Amendment between the parties supersedes any prior or contemporaneous communications, representations or agreements between the parties, whether oral or written, regarding the subject matter of the entire Amendment. The terms and conditions of this Amendment may not be changed except by an amendment expressly referencing this Amendment by section number and signed by an authorized representative of each party.

8. Additions/Modifications. If seeking any addition or modification to the Amendment, the parties agree to reference the specific paragraph number sought to be changed on any future document or purchase order issued in furtherance of the Amendment, however, an omission of the reference to same shall not affect its applicability. In no event shall either party be bound by any terms contained in any purchase order, acknowledgement, or other writings unless: (a) such purchase order, acknowledgement, or other writings specifically refer to the Amendment or to the specific clause they are intended to modify; (b) clearly indicate the intention of both parties to override and modify the Amendment; and (c) such purchase order, acknowledgement, or other writings are signed,

with specific material clauses separately initialed, by authorized representatives of both parties.

9. Breach. Upon deliberate breach of the Amendment by either party, the non-breaching party shall be entitled to terminate the Amendment without notice, with all of the remedies it would have in the event of termination and may also have such other remedies as it may be entitled to in law or in equity.

10. Survival. This Amendment shall survive the completion of or any termination of the original contract, revised contract, or agreement or other document to which it may accompany or incorporate by reference.

All other provisions of the Agreement dated April 23, 2013, are unchanged and remain in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Amendment.

The CITY OF FRANKLIN, TENNESSEE

Hazen and Sawyer

By: _____
Dr. Ken Moore
Mayor
Date: _____

By: 
Print: Scott Woodward
Title: Vice President
Date: 10/28/2019

Attest:

Eric S. Stuckey
City Administrator
Date: _____

Approved as to form:

Maricruz R. Fincher, Staff Attorney



October 16, 2019

Mr. Brian Goodwin, P.E.
City of Franklin
Water Management Dept.
124 Lumbar Dr.
Franklin, TN 37064

Re: South Prong Interceptor Improvements

Dear Mr. Goodwin:

We are pleased to submit this proposal to extend our current design upstream to Carothers Pky. Based on recent basin modeling requested by the City, Hazen determined that the current design did not take the interceptor upsize far enough upstream to prevent surcharging. Hazen took the existing sewer model and incorporated the proposed developments listed in the Water Departments Development Tool and also coordinated with the Planning Department to make sure all proposed developments in the basin were included so the full reach of the interceptor improvement could be determined. This modeling effort resulted in the 36-inch upsize needing to be continued approximately 3,800 linear feet upstream, stopping just prior to crossing Carothers Pky.

This letter proposal is for the additional work needed to add approximately 3,800 linear feet of 36-inch diameter sewer interceptor to the current design project. The scope includes additional Design, Survey, Geotechnical, Environmental/Historical, Easements, Permitting, and Bidding assistance to the complete revised project. Construction Administration needs shall be determined at a later date.

Task	Description	2013 Current Budget	Summary of Scope Change	2019 Budget Modification Request	Proposed New Budget
1A	Preliminary Study	\$52,700	None	\$0	\$52,000
	Expenses	\$1,000	None	\$0	\$1,000
1B	Design	\$141,500	Additional Design needed for the 3,800 LF of sewer added to the project by the City	\$150,000	\$291,500
	Survey	\$34,500	Additional Survey needed for the 3,800 LF of sewer added from Mallory Ln to Carothers Pky.	\$32,750	\$67,250
	Easements (\$450/each)	\$6,300	Additional easements (5)	\$2,250	\$8,550
	Geotechnical	\$14,000	Additional Borings (10)	\$32,000	\$46,000
	Environmental/Historical	\$0	Sewer Corridor evaluation for Environmental and Historical entities	\$10,000	\$10,000
	Permitting/Fees	\$0	Federal, State, and Local Submittals	\$15,000	\$15,000
	Expenses	\$10,000	None	\$0	\$10,000
	Bidding	\$0	Preparation of Bid Documents, Advertisement, Respond to Questions, Prepare Addendums, Review bids, and Prepare a Recommendation Letter	\$13,000	\$13,000
Subtotal Task 1		\$260,000		\$255,000	\$515,000

2	Condition Assessment and Design for 36-inch CIPP	\$30,000	None	\$0	\$30,000
	Allowance for CCTV/Sonar	\$10,000	None	\$0	\$10,000
	Expenses	<u>\$2,000</u>	None	<u>\$0</u>	<u>\$2,000</u>
	Subtotal Task 2	\$42,000			\$42,000
3	Permanent Flow Monitoring Station	\$31,500	None	\$0	\$31,500
	Survey	\$2,000	None	\$0	\$2,000
	Expenses	<u>\$1,500</u>	None	<u>\$0</u>	<u>\$1,500</u>
	Subtotal Task 3	\$35,000			\$35,000
	Total Not-to-Exceed	\$337,000		\$255,000	\$592,000

Hazen proposes to perform these tasks on an hourly basis for the not to exceed fee of **\$255,000**. Hazen will begin work immediately upon notice to proceed and design will be completed within 6 months.

As always, we appreciate the opportunity and look forward to working with the City to complete the project. Please contact Scott Woodard or me if you have questions or require additional information.

Sincerely,
Hazen and Sawyer



Michael Orr, P.E.
Senior Associate

cc: Scott Woodard, P.E., (Vice President)

**AMENDMENT NO. 1 TO
PROFESSIONAL SERVICES AGREEMENT
FOR THE WATER RECLAMATION FACILITY (WRF)
EXPANSION
AND UPGRADES PROJECT
COF Contract No. 2018-0143**

THIS AMENDMENT is made and entered into on this the ____ day of _____, 2019, by and between the **City of Franklin, Tennessee** ("City") and **CDM Smith** ("Consultant").

WITNESSETH:

WHEREAS, City and Consultant entered into a Professional Services Agreement ("Agreement") entitled **Franklin Water Reclamation Facility Upgrades Project Construction Services** dated the 14th day of August 2018; and

WHEREAS, said Agreement stipulated that the Consultant would be paid a not-to-exceed fee of **ELEVEN MILLION SIX HUNDRED SEVENTY-SEVEN THOUSAND THREE HUNDRED NINETY-SIX AND NO/100 DOLLARS (\$11,677,396.00)**, as authorized by the Water Management Department and as detailed in the fee Schedule; and

WHEREAS, the City and Consultant realize the need for additional design work for the Project due to receiving additional State Revolving Fund loans for the remainder amount of the WRF Upgrades project; and

WHEREAS, the Consultant has provided a Proposal for an increase in engineering services, as described in Exhibit A dated October 18, 2019, in the amount of **THIRTY-NINE THOUSAND SIX HUNDRED AND NO/100 DOLLARS (\$39,600.00)**; and

WHEREAS, the City has reviewed the Proposal and desires to enter into an agreement for the Project as proposed.

NOW, THEREFORE, in consideration of these premises and the mutual promises contained herein, it is agreed by and between the parties as follows:

1. The foregoing recitals are incorporated by reference as if fully stated herein.
2. Consultant's Responsibilities and Duties. Consultant agrees to perform the work as proposed in their October 18, 2019, letter of proposal (**Exhibit A**) which includes the Scope of Services for this Amendment, all of which shall be considered as an integral part hereof.

3. City's Responsibilities and Duties. City shall pay Consultant for the cost of the work as described in Exhibit A an amount not to exceed **THIRTY-NINE THOUSAND SIX HUNDRED AND NO/100 DOLLARS (\$39,600.00).**

The City reserves the right to issue any payments jointly to the Consultant and Sub-Consultant when the City receives information that the Consultant has not paid its Sub-Consultant.

4. Waiver. Neither party's failure nor delay to exercise any of its rights or powers under this Amendment will constitute or be deemed a waiver or forfeiture of those rights or powers. For a waiver of a right or power to be effective, it must be in writing signed by the waiving party. An effective waiver of a right or power shall not be construed as either (a) a future or continuing waiver of that same right or power, or (b) the waiver of any other right or power.

5. Severability. If any term or provision of the Amendment is held to be illegal or unenforceable, the validity or enforceability of the remainder of the Amendment will not be affected.

6. Precedence. In the event of conflict between this Amendment and the provisions of the previous Agreement(s), or any other contract, agreement or other document to which this Amendment may accompany or incorporate by reference, the provisions of this Amendment will, to the extent of such conflict (or to the extent the Agreement is silent), take precedence unless such document expressly states that it is amending this Amendment.

7. Entire Agreement. The Amendment between the parties supersedes any prior or contemporaneous communications, representations or agreements between the parties, whether oral or written, regarding the subject matter of the entire Amendment. The terms and conditions of this Amendment may not be changed except by an amendment expressly referencing this Amendment by section number and signed by an authorized representative of each party.

8. Additions/Modifications. If seeking any addition or modification to the Amendment, the parties agree to reference the specific paragraph number sought to be changed on any future document or purchase order issued in furtherance of the Amendment, however, an omission of the reference to same shall not affect its applicability. In no event shall either party be bound by any terms contained in any purchase order, acknowledgement, or other writings unless: (a) such purchase order, acknowledgement, or other writings specifically refer to the Amendment or to the specific clause they are intended to modify; (b) clearly indicate the intention of both parties to override and modify the Amendment; and (c) such purchase order, acknowledgement, or other writings are signed,

with specific material clauses separately initialed, by authorized representatives of both parties.

9. Breach. Upon deliberate breach of the Amendment by either party, the non-breaching party shall be entitled to terminate the Amendment without notice, with all of the remedies it would have in the event of termination, and may also have such other remedies as it may be entitled to in law or in equity.

10. Survival. This Amendment shall survive the completion of or any termination of the original contract, revised contract, or agreement or other document to which it may accompany or incorporate by reference.

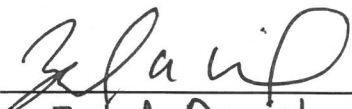
All other provisions of the Agreement dated August 14, 2018, are unchanged and remain in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Amendment.

The CITY OF FRANKLIN, TENNESSEE

CDM SMITH

By: _____
Dr. Ken Moore
Mayor
Date: _____

By: 
Print: Zack A. Daniel
Title: Vice President
Date: November 14, 2019

Attest:

Eric S. Stuckey
City Administrator
Date: _____

Approved as to form:

Maricruz R. Fincher, Staff Attorney



Parkview Towers
210 25th Avenue North, Suite 1102
Nashville, Tennessee 37203
tel: 615-771-2466
fax: 615-778-9733

October 18, 2019

Ms. Michelle Hatcher, P.E.
City of Franklin
Water Management Department
124 Lumber Drive
Franklin, TN 37064

Subject: Franklin WRF Expansion Project
Amendment No. 1

Dear Ms. Hatcher;

Please see attached our proposal for Amendment No. 1 to our existing contract. Please contact Zack or me if you have questions or concerns, and we sincerely appreciate the opportunity to continue our work with the City of Franklin.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Daniel A. Harris'.

Daniel A. Harris, PMP, CCM, LEED GA
Project Manager
CDM Smith

cc: Zack Daniel, CDM Smith
Brian Goodwin, City of Franklin
File 231666.05.02.10



Amendment 1 Proposal

Franklin Wastewater Reclamation Facility Construction Services

This document is the first proposed amendment to the August 14, 2018 contract between the City of Franklin, Tennessee (City) and CDM Smith for the Franklin Wastewater Reclamation Facility (WRF) Upgrades Project Construction Services (COF Contract No. 2018-0143). This amendment redistributes costs from the original budget to allow for more efficient utilization of funding due to costs not foreseen in the original budget and other costs accounted for in the original budget, which will no longer be necessary for the original purpose. This amendment also reflects additional level of effort for administration of additional three (3) State Revolving Fund (SRF) loans as detailed on the attached breakdown.

Scope

The proposed amendment to the scope of work consists changes to the following tasks:

- Task R1 – Resident Services

Task R1 Reallocation of Costs for to Allow for PM/Lead RPR Relocation

The original budget allowed \$10,200 for Apartment Rental in the OTHER DIRECT COSTS category. These costs are deleted. A new line is added allowing \$3,710 for RELOCATION as agreed by the Department of Water Management. The remaining \$6,490 from the Apartment Rental line moves to the Miscellaneous Equipment/Supplies line for a new total for that line of \$10,990. This scope change will not result in a change to the contract value.

- Task G3 – Reviews, Clarifications and Interpretations

Task G3 Reallocation of Costs Previously Assigned to Document Management System

The original budget allowed \$100,000 in Miscellaneous Equipment/Supplies in the OTHER DIRECT COSTS category for licensing fees for a Document Management System to be provided by CDM Smith. Of this funding, \$99,905 is reassigned to Engineer/Scientist (689 hours @ \$145). The remaining \$95 is reallocated to Document Reproduction. This scope change will not result in a change to the contract value.

- Task S2 – SRF Related Services

Task G3 Costs for Administration of Additional SRF Loans

The original budget allowed \$143,000 for administration of SRF loans in place at project inception. Per the October 9, 2019 letter from Leslie Gillespie-Marthaler, PhD (TDEC), an additional \$32,500,000 in loans has been made available to the City for project construction costs. This amendment allows for professional services for administrative assistance including facilitating services for up to three (3) SRF loans. Tasks may include planning and bidding/advertising services, including but not limited to attending public meetings, compiling, transmitting, reviewing and facilitating loan application

documents, document management and file review assistance, other meeting attendance, assistance with Davis-Bacon and American Iron and Steel compliance limited to document management and SRF liaison assistance. This scope change adds \$39,600 to the contract upper limit.

Schedule

This amendment will not result in a change to the contract schedule.

Budget

CDM Smith proposes to provide the above scope changes for a revised upper limit of \$11,716,996.00 (Eleven million seven hundred sixteen thousand nine hundred ninety-six and 0/100 dollars) as detailed on Table 1 attached.

Table 1
Summary of Budget by Task
Franklin WRF Construction Services Amendment 1 Proposal

Task No.	G1	G2	G3	G4	G5	Resident Services		Construction Special Services					S8
						R1	S1	S2	S3	S4			
LABOR	Rate	Project Management	Project Meetings	Reviews, Clarifications and Interpretations	Office Staff Visits	Witnessing Factory Tests	Construction Observation	Change Management	SRF Related Services	Record Drawings	Startup & Commissioning Services	O&M Services	Allowance for CMMS Development Guidance
Officer	\$225	404	210	0	0	0	0	26	0	0	0	0	640
Project Manager/Lead RPR	\$190	0	0	0	0	0	7280	0	0	0	0	0	7280
Project Controls Specialist	\$110	200	0	0	0	0	0	0	0	0	0	0	200
Senior Technical Specialist	\$210	2024	747	866	376	128	0	325	0	28	710	33	5237
Technical Specialist	\$190	74	836	908	1996	112	0	325	0	55	48	33	4387
Senior Engineer/Scientist	\$165	50	166	1300	72	0	0	325	0	56	4274	33	6276
Engineer/Scientist	\$145	3192	510	4247	0	0	0	325	0	113	156	33	8576
Junior Engineer/Scientist	\$120	0	0	2450	0	0	0	325	0	0	0	0	2775
Senior Designer	\$140	0	0	0	0	0	0	260	0	733	0	0	993
Contract Administrator	\$110	398	0	0	0	0	0	0	0	0	0	0	398
Construction Coordinator	\$210	10	50	344	0	0	0	270	0	0	0	0	674
Designer/Drafter/Technician	\$95	0	0	200	0	0	0	260	0	451	0	0	911
Administrative Staff	\$90	1604	73	0	0	0	0	0	0	34	150	0	1861
Electrical RPR	\$165	0	0	0	0	0	800	0	0	56	0	0	856
Senior RPR	\$140	0	0	0	0	0	7880	0	0	0	0	0	7880
RPR	\$110	0	0	0	0	0	11360	0	0	0	0	0	11360
Construction Cost Estimator	\$160	0	0	0	0	0	0	260	0	0	0	0	260
TOTAL HOURS		7956	2591	10315	2444	240	27320	2701	0	1527	5338	132	60564
TOTAL DOLLARS		\$1,213,330	\$481,153	\$1,569,935	\$470,080	\$48,160	\$3,868,000	\$435,000	\$0	\$199,898	\$899,550	\$23,430	\$9,208,535
OTHER DIRECT COSTS													
Car Mileage	\$0.570	\$171	\$17,844	\$0	\$11,223	\$399	\$23,598	\$3,420	\$0	\$0	\$2,913	\$114	\$59,682
Rental Car	\$70	\$420	\$3,430	\$0	\$15,540	\$2,100	\$7,000	\$0	\$0	\$0	\$11,970	\$840	\$41,300
Air Fare	\$700	\$4,200	\$33,600	\$0	\$65,100	\$11,600	\$23,100	\$0	\$0	\$0	\$51,800	\$2,800	\$192,200
Meals	\$63	\$0	\$8,411	\$0	\$14,742	\$1,890	\$6,300	\$1,890	\$0	\$0	\$10,962	\$756	\$44,951
Hotel	\$157	\$942	\$15,936	\$0	\$17,113	\$2,512	\$15,700	\$4,710	\$0	\$0	\$28,260	\$1,884	\$87,057
Apartment Rental	\$1,300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Telephone	\$0	\$0	\$0	\$0	\$0	\$0	\$11,520	\$0	\$0	\$0	\$0	\$0	\$11,520
Document Reproduction	\$1,405	\$2,085	\$330	\$12,515	\$890	\$140	\$0	\$4,000	\$0	\$5,500	\$2,132	\$176	\$28,843
Shipping	\$1,185	\$0	\$0	\$8,050	\$0	\$0	\$0	\$980	\$0	\$0	\$0	\$0	\$10,545
Relocation	\$0	\$0	\$0	\$0	\$0	\$0	\$3,710	\$0	\$0	\$0	\$0	\$0	\$0
Miscellaneous Equipment/Supplies	\$0	\$0	\$0	\$0	\$0	\$0	\$10,990	\$0	\$0	\$0	\$0	\$0	\$10,990
TOTAL ODCs Plus 0% Markup		\$8,323	\$81,635	\$20,565	\$124,608	\$18,641	\$101,918	\$15,000	\$0	\$5,500	\$108,037	\$6,570	\$490,797
OUTSIDE PROFESSIONALS													
Structural - Special Inspection		\$0	\$0	\$0	\$0	\$0	\$30,000	\$0	\$0	\$0	\$0	\$0	\$30,000
Civil Infrastructure Associates		\$44,640	\$0	\$37,200	\$0	\$0	\$135,000	\$0	\$0	\$11,200	\$0	\$0	\$228,040
LDA Eng (SRF Admin & Svcs)		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$166,000	\$0	\$0	\$0	\$166,000
Tom Lamb (RPR and A&S Support)		\$0	\$0	\$0	\$0	\$0	\$906,200	\$0	\$0	\$0	\$0	\$0	\$1,410,200
Subtotal OPs		\$44,640	\$0	\$37,200	\$0	\$0	\$1,071,200	\$0	\$0	\$11,200	\$0	\$0	\$1,834,240
Total OPs Plus 10% Markup	10%	\$49,104	\$0	\$40,920	\$0	\$0	\$1,178,320	\$0	\$0	\$12,320	\$0	\$0	\$2,017,664
TOTALS		\$1,270,757	\$562,787	\$1,631,420	\$594,688	\$66,801	\$5,148,238	\$450,000	\$737,000	\$217,718	\$1,007,587	\$30,000	\$11,716,996

LDA-EK_Anticipated hours for new WRF loans 20191017

Item	Anticipated Hours	Hourly Rate	Total
Liason with SRF--user rate status, status of loan app docs	10	\$ 150.00	\$ 1,500.00
Review initial SRF loan application docs	10	\$ 150.00	\$ 1,500.00
Prepare/attend/advertise/document Public Meeting	14	\$ 150.00	\$ 2,100.00
Prep/attend Council meeting for passage of Authorizing Resolution, follow up RE signed resolution/ meeting minutes, etc.	10	\$ 150.00	\$ 1,500.00
Review signed loan application docs, ensuring correct # of SRF copies	20	\$ 150.00	\$ 3,000.00
Collate additional docs needed for SRF loan application packages--Title VI, etc.	6	\$ 150.00	\$ 900.00
Respond to SRF questions about completed loan application documents	6	\$ 150.00	\$ 900.00
Create or check new files for documetation	4	\$ 150.00	\$ 600.00
Total per new loan	80		\$ 12,000.00
Number of anticipated new loans	3		
Total for 3 new loans			\$ 36,000.00



CITY OF FRANKLIN
109 3rd Avenue South
Franklin, TN 37064

LANDSCAPE DETAILS

EAST MCEWEN DRIVE ROUNDABOUT
CITY OF FRANKLIN
FRANKLIN, WILLIAMSON COUNTY, TENNESSEE

REVISIONS

L2



A PLANTING SECTION THROUGH CENTER OF ROUNDABOUT
1"=10'

0' 5' 10' 20'
Scale: 1"=10'



B PLANTING ELEVATION
1"=10'

0' 5' 10' 20'
Scale: 1"=10'



C PLANTING RENDERING
NOT TO SCALE

AMENDMENT NO. 2 TO
PROFESSIONAL SERVICES AGREEMENT
DESIGN OF INTERSECTION IMPROVEMENTS AT THE
MCEWEN DRIVE INTERCHANGE WITH I-65
COF Contract No. 2018-0062

THIS AMENDMENT is made and entered into on this the ____ day of _____ 20____, by and between the City of Franklin, Tennessee ("City") and Alfred Benesch & Company ("Consultant").

WITNESSETH:

WHEREAS, on May 8, 2018 City and Consultant entered into a Professional Services Agreement ("Agreement") entitled Design of Intersection Improvements at the McEwen Drive Interchange with I-65; and

WHEREAS, said Agreement stipulated that the Consultant would be paid a not-to-exceed fee of Twenty-Eight Thousand Three Hundred Sixty-Five and 60/100 Dollars (\$28,365.60) for survey, engineering, and related technical services, as detailed in the Scope of Services; and

WHEREAS, on December 11, 2018, the Board of Mayor and Aldermen ("BOMA") approved Amendment No. 1 to the Agreement with the Consultant for additional survey and roadway design to allow for the modification of the right-turn lane(s) from eastbound West McEwen Drive to southbound I-65 at a cost increase not-to-exceed Thirty-Five Thousand Fifteen and 20/100 Dollars (\$35,015.20); and

WHEREAS, the City and Consultant realize the need for additional design work for the Project due to circumstances beyond the control of the Consultant; and

WHEREAS, the Consultant has provided a Proposal ("Attachment A"), dated August 26, 2019 for an increase in engineering services in the amount of Fourteen Thousand Three Hundred Forty-Five and No/100 Dollars (\$14,345.00); and

WHEREAS, the City has reviewed the Proposal and desires to enter into an agreement for the Project as proposed.

NOW, THEREFORE, in consideration of these premises and the mutual promises contained herein, it is agreed by and between the parties as follows:

1. The foregoing recitals are incorporated by reference as if fully stated herein.
2. Consultant's Responsibilities and Duties. Consultant agrees to perform the work as proposed in Attachment A, dated August 26, 2019, which includes the Scope of Services for this Amendment, all of which shall be considered as an integral part hereof.
3. City's Responsibilities and Duties. City shall pay Consultant for the cost of the work as described in Attachment A in an amount not-to-exceed Fourteen Thousand Three Hundred Forty-Five and No/100 Dollars (\$14,345.00).

The City reserves the right to issue any payments jointly to the Consultant and Sub-Consultant when the City receives information that the Consultant has not paid its Sub-Consultant.

4. Waiver. Neither party's failure nor delay to exercise any of its rights or powers under this Amendment will constitute or be deemed a waiver or forfeiture of those rights or powers. For a waiver of a right or power to be effective, it must be in writing signed by the waiving party. An effective waiver of a right or power shall not be construed as either (a) a future or continuing waiver of that same right or power, or (b) the waiver of any other right or power.

5. Severability. If any term or provision of the Amendment is held to be illegal or unenforceable, the validity or enforceability of the remainder of the Amendment will not be affected.

6. Precedence. In the event of conflict between this Amendment and the provisions of the previous Agreement(s), or any other contract, agreement or other document to which this Amendment may accompany or incorporate by reference, the provisions of this Amendment will, to the extent of such conflict (or to the extent the Agreement is silent), take precedence unless such document expressly states that it is amending this Amendment.

7. Entire Agreement. The Amendment between the parties supersedes any prior or contemporaneous communications, representations or agreements between the parties, whether oral or written, regarding the subject matter of the entire Amendment. The terms and conditions of this Amendment may not be changed except by an amendment expressly referencing this Amendment by section number and signed by an authorized representative of each party.

8. Additions/Modifications. If seeking any addition or modification to the Amendment, the parties agree to reference the specific paragraph number sought to be changed on any future document or purchase order issued in furtherance of the Amendment, however, an omission of the reference to same shall not affect its applicability. In no event shall either party be bound by any terms contained in any purchase order, acknowledgement, or other writings unless: (a) such purchase order, acknowledgement, or other writings specifically refer to the Amendment or to the specific clause they are intended to modify; (b) clearly indicate the intention of both parties to override and modify the Amendment; and (c) such purchase order, acknowledgement, or other writings are signed, with specific material clauses separately initialed, by authorized representatives of both parties.

9. Breach. Upon deliberate breach of the Amendment by either party, the non-breaching party shall be entitled to terminate the Amendment without notice, with all of the remedies it would have in the event of termination, and may also have such other remedies as it may be entitled to in law or in equity.

10. Survival. This Amendment shall survive the completion of or any termination of the original contract, revised contract, or agreement or other document to which it may accompany or incorporate by reference.

All other provisions of the Agreement, dated March 20, 2018, and Amendment No. 1, dated December 11, 2018, are unchanged and remain in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Amendment.

CITY OF FRANKLIN, TENNESSEE:

GEOTEK ENGINEERING COMPANY, INC.

By: _____
Eric S. Stuckey
Mayor
Date: _____

By: _____
Print: _____
Title: _____
Date: _____

Attest:

Eric S. Stuckey
City Administrator
Date: _____

Approved as to Form:

Shauna R. Billingsley, City Attorney



Alfred Benesch & Company
8 Cadillac Drive, Suite 250
Brentwood, Tennessee 37027
www.benesch.com
P 615-370-6079
F 615-627-4066

August 26, 2019

Mr. Jonathan Marston, PE
City of Franklin
109 Third Avenue South, Suite 142
Franklin, TN 37064

RE: Supplemental Scope and Man-day Estimate to Provide Engineering Services
For McEwen Drive WB ramp to I-65 Southbound
Franklin, TN

Dear Mr. Marston:

Per our phone conversations and email correspondence, we have completed a scope and man-day estimate to identify items that were added to the project outside the original scope of services. In addition, we have included a cost plus amount to provide as needed construction phase assistance. We appreciate the opportunity to submit this information for your review. The additional scope of work items are detailed as follows:

1. Conceptual Design and Construction Estimate for potential widening of interchange ramp from northbound I-65 to eastbound McEwen Drive
 - a. Benesch coordinated with the City and TDOT to provide a conceptual design for the widening of the interchange ramp from NB I-65 to EB McEwen Drive. Benesch discussed this option with Shane Hester at TDOT Region 3 and Robert Jowers with TDOT Geotech Division. We also corresponded with TTL to obtain accurate pricing information.
 - b. Benesch reviewed alternatives related to the potential rock cut or rock draping that would be required to satisfy TDOTs requirements for a rock catchment area.
 - c. Benesch also reviewed construction cost estimates related to the potential rock catchment area alternatives.
 - d. Additional Hours:
 - i. Principal: 8hrs @ \$200/hr = \$1,600
 - ii. Project Engineer II: 11.5hrs @ \$122/hr = \$1403
2. Additional Utility Coordination
 - a. Benesch completed addition utility coordination which involved the following:
 - i. Project site visit with MTEMC and the City to discuss the relocation of existing roadway lighting.
 - ii. Extensive coordination with Mallory Valley Utility District regarding easement documents. Said coordination was needed to discuss the fact that their line was placed outside the original easement documents.
 - iii. Review of Atmos Gas facilities.
 - b. Additional Hours:
 - i. Project Engineer II: 7hrs @ \$122/hr = \$854



3. Deed and Exhibit for ROW acquisition on Drury Property
 - a. Benesch created an exhibit and deed description for the acquisition of permanent fee-simple right-of-way and a temporary construction easement for one parcel.
 - b. Benesch reviewed additional right-of-way documentation provided by the City to ensure that the original survey data was correct and that based on all available information, right-of-way acquisition would be required.
 - c. Additional Hours:
 - i. Project Engineer II: 4hrs @ \$122/hr = \$488
4. Construction Phase Assistance (As Needed):
 - a. Cost Plus \$10,000.00

Based on the above scope of additional services the total supplement amount is as follows:

Items 1, 2 and 3	Lump Sum	\$ 4,345.00
<u>Item 4</u>	<u>Cost Plus</u>	<u>\$10,000.00</u>
	Total	\$14,345.00

If you have any questions or need additional information, please let me know.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sammie McCoy".

Sammie McCoy, PE
Vice President

CITY OF FRANKLIN, TENNESSEE
PROFESSIONAL SERVICES AGREEMENT
COF Contract No. 2019-0317

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and ALFRED BENESCH & COMPANY hereinafter referenced as Consultant, who mutually agree as follows:

DECLARATIONS. City desires to retain Consultant to provide engineering, related technical, and other services in connection with City's project hereinafter referenced as Project. The Project is described as follows:

FINAL DESIGN OF THE MULTI-USE TRAIL & BRIDGE AT
THE PARK AT HARLINSDALE FARM

1. SCOPE OF SERVICES. Consultant shall provide survey, engineering, and related technical services for the Project in accordance with the Scope of Services ("Services") as found in Attachment A, which shall be considered as an integral part hereof.
2. Consultant shall submit as a part of Attachment A an individual Fee Schedule and a Completion Schedule for the Project based on the detailed Scope of Services.
3. In event of a conflict between this Agreement and the attached document(s), this Agreement shall supersede conflicting terms and conditions.
4. Consultant shall be paid on a monthly basis for work performed, based on the Fee Schedule as contained in Attachment A, in the Amount Not-to-Exceed Three Hundred Ninety-Eight Thousand Two Hundred Sixty-Eight and No/100 Dollars (\$398,268.00).
5. Payment of reimbursable items, at direct cost and as listed in the Scope of Services, shall be allowed to exceed the above listed not-to-exceed contract ceiling.

The Board of Mayor and Aldermen Approved this Agreement on the ____ Day of _____ 20____.

TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES

ARTICLE 1. SERVICES. Consultant will:

- 1.1 Act for City in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with standards of competent consultants using the standards in the industry:
- 1.2 Consider all reports to be confidential and distribute copies of the same only to those persons specifically designated by the City.
- 1.3 Perform all services under the general direction of a senior professional employee, licensed and/or registered in the State of Tennessee, when appropriate.
- 1.4 Designate, in writing, the sole Project representative to coordinate with City the Services to be provided, including all contact information.
- 1.5 Unless provided for in the Project Scope of Services (Attachment A), Consultant shall perform all Services with his own forces (employees). Should sub-consultants be proposed to be used in the Project, a listing of said sub-consultants with Services to be performed shall be provided. After approval of this Agreement, no substitute for sub-consultants shall be allowed unless approved by City.
- 1.6 Retain pertinent records relating to the services performed for a period of seven (7) years following the completion of the work; during this period the records shall be available for review by City at all reasonable times.

ARTICLE 2. CITY'S RESPONSIBILITIES. City, or its authorized representative, will:

- 2.1 Provide Consultant with all information regarding the Project, which is available to, or reasonably obtainable by, the City.
- 2.2 Furnish right-of-entry onto the Project site for Consultant's necessary field studies and surveys. Consultant will endeavor to restore the site to its original condition and shall remain solely liable for all damages, costs and expenses, including reasonable attorneys' fees, for failure to make such restoration.
- 2.3 Designate, in writing, the sole Project representative to coordinate with and direct the Consultant, including all contact information.
- 2.4 Guarantee to Consultant that it has the legal capacity to enter into this contract and that sufficient monies are available to fund Consultant's compensation.

ARTICLE 3. GENERAL CONDITIONS.

- 3.1 Consultant, by the performance of services covered hereunder, does not in any way assume, abridge or abrogate any of those duties, responsibilities or authorities customarily vested in other professionals or agencies participating in the Project.
- 3.2 Consultant shall be responsible for the acts or omissions of any party involved in concurrent or subsequent phases of the Project acting upon written instruction issued by the Consultant.
- 3.3 Neither City nor Consultant may assign or transfer its duties or interest in this Agreement without written consent of the other party.
- 3.4 ALLOCATION OF RISK AND LIABILITY; GENERAL. Considering the potential liabilities that may exist during the performance of the services of this Agreement, the relative benefits and risks of the Project, and the Consultant's fee for the services rendered, and in consideration of the promises contained in this Agreement, the City and the Consultant agree to allocate and limit such liabilities in accordance with this Article.

- 3.5 INDEMNIFICATION. Consultant agrees to indemnify and hold City harmless from and against legal liability for all judgments, losses, damages, and expenses to the extent such judgments, losses, damages, or expenses are caused by Consultant's negligent act, error or omission in the performance of the services of this Agreement. In the event judgments, losses, damages, or expenses are caused by the joint or concurrent negligence of Consultant and City, they shall be borne by each party in proportion to its own negligence.
- 3.5.1 SURVIVAL. The terms and conditions of this paragraph shall survive completion of this services agreement.
- 3.6 LIMITATIONS OF RESPONSIBILITY. Consultant shall not be responsible for (a) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project unless specifically undertaken in Attachment A, Scope of Services ; (b) the failure of any contractor, subcontractor, Consultant, or other Project participant, not under contract to Consultant, to fulfill contractual responsibilities to City or to comply with federal, state, or local laws, regulations, and codes; or (c) procuring permits, certificates, and licenses required for any construction unless such procurement responsibilities are specifically assigned to Consultant in Attachment A, Scope of Services.

ARTICLE 4. TERMINATION BY THE CITY. The City may terminate this Agreement in accordance with the following terms and conditions:

- 4.1 Termination for Convenience. The City may, when in the interests of the City, terminate performance under this Agreement with the Consultant, in whole or in part, for the convenience of the City. The City shall give written notice of such termination to the Consultant specifying when termination becomes effective. The Consultant shall incur no further obligations in connection with the work so terminated, other than warranties and guarantees for completed work and installed equipment, and the Consultant shall stop work when such termination becomes effective. The Consultant shall also terminate outstanding orders and subcontracts for the affected work. The Consultant shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The City may direct the Consultant to assign the Consultant's right, title and interest under termination orders or subcontracts to the City or its designee. The Consultant shall transfer title and deliver to the City such completed or partially completed work and materials, equipment, parts, fixtures, information and Contract rights as the Consultant has in its possession or control. When terminated for convenience, the Consultant shall be compensated as follows:
- (1) The Consultant shall submit a termination claim to the City specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the City. If the Consultant fails to file a termination claim within one (1) year from the effective date of termination, the City shall pay the Consultant the amount the City deems the Consultant is due.
 - (2) The City and the Consultant may agree to the compensation, if any, due to the Consultant hereunder.
 - (3) Absent agreement to the amount due to the Consultant, the City shall pay the Consultant the following amounts:
 - (a) Contract costs for labor, materials, equipment and other services accepted under this Agreement;

- (b) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the work, and in terminating the Consultant's performance, plus a fair and reasonable allowance for direct job site overhead and earned profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it reasonably appears that the Consultant would have not profited or would have sustained a loss if the entire Agreement would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

The total sum to be paid the Consultant under this Section shall not exceed the total Agreement Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

- 4.2 Termination for Cause. If the Consultant does not perform the work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment or materials, or if it fails to timely discharge its obligations for labor, equipment and materials, or proceeds to disobey applicable law, or otherwise commits a violation of a material provision of this Agreement, then the City, in addition to any other rights it may have against the Consultant or others, may terminate the performance of the Consultant, in whole or in part at the City's sole option, and assume possession of the Project Plans and materials and may complete the work.

In such case, the Consultant shall not be paid further until the work is complete. After Completion has been achieved, if any portion of the Contract Price, as it may be modified hereunder, remains after the cost to the City of completing the work, including all costs and expenses of every nature incurred, has been deducted by the City, such remainder shall belong to the Consultant. Otherwise, the Consultant shall pay and make whole the City for such cost. This obligation for payment shall survive the termination of the Agreement.

In the event the employment of the Consultant is terminated by the City for cause pursuant to this Section and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under this Section and the provisions of Section 4.1 shall apply.

- 4.3 Termination for Non-Appropriation. The City may also terminate this Agreement, in whole or in part, for non-appropriation of sufficient funds to complete or partially complete the Project, regardless of the source of such funds, and such termination shall be on the terms of Section 4.1.
- 4.4 The City's rights under this Section shall be in addition to those contained elsewhere herein or provided by law.

ARTICLE 5. SCOPE OF SERVICES. Consultant shall provide the Services as described in Attachment A, Scope of Services.

5.1 By mutual agreement, this Agreement and scope can be amended by the parties. The scope and fee for any additional tasks or services under such amendment shall be mutually negotiated and agreed to in writing prior to beginning such additional tasks or services.

5.2 ENVIRONMENTAL RESPONSIBILITY.

Where drilling/sampling services are involved, the samples obtained from the Project site are the property of the City. Should any of these samples be recognized by the Consultant to be contaminated, the City shall remove them from the Consultant's custody and transport them to a disposal site, all in accordance with applicable government statutes, ordinances, and regulations. For all other samples, the Consultant shall retain them for a sixty (60)-day period following the submission of the drilling/sampling report unless the City directs otherwise; thereafter, the Consultant shall discard the samples in accordance with all federal, state and local laws.

ARTICLE 6. SCHEDULE.

6.1 TIME OF THE ESSENCE. The parties agree that time is of the essence with respect to the parties' performance of all provisions of the Agreement.

6.2 Before executing this Agreement, the Consultant shall have prepared and submitted for approval to the City a Completion Schedule for the Project with milestones for the various stages (tasks) of the Services as outlined in the Scope of Services. The Consultant shall submit and obtain the City's approval for any proposed changes to the logic, durations, sequences, or timing of tasks as approved in the Completion Schedule.

6.3 FORCE MAJEURE. Neither party will be liable to the other for any delay or failure to perform any of the services or obligations set forth in this Agreement due to causes beyond its reasonable control, and performance times will be considered extended for a period of time equivalent to the time lost because of such delay plus a reasonable period of time to allow the parties to recommence performance of their respective obligations hereunder. Should a circumstance of force majeure last more than ninety (90) days, either party may by written notice to the other terminate this Agreement. The term "force majeure" as used herein shall mean the following: acts of God; strikes, lockouts or other industrial disturbances; acts of public enemies; orders or restraints of any kind of the government of the United States or of the State or any of their departments, agencies or officials, or any civil or military authority; insurrections, riots, landslides, earthquakes, fires, storms, tornadoes, droughts, floods, explosions, breakage or accident to machinery, transmission pipes or canals; or any other cause or event not reasonably within the control of either party.

6.4 Should City request changes in the scope, extent, or character of the Project, the fee and the time of performance of Consultant's Services as indicated in Attachment A shall be adjusted equitably.

ARTICLE 7. USE OF DOCUMENTS, DATA.

7.1 All Documents, including, but not limited to, reports, drawings, specifications, and computer software prepared by Consultant pursuant to this Agreement are instruments of service in respect to the Project. The City shall retain an ownership and property interest therein whether or not the Project is completed.

- 7.1.1 USE OF DATA SYSTEMS: The City maintains all rights to data systems and data (including derivative or hidden data such as metadata) created and used by Consultant through information supplied to the consultant by the City.
- 7.1.2 DISCLOSURE OF DOCUMENTS/DATA. City may be required to disclose documents or data under state or federal law. City shall notify Consultant if a request for data or documents has been made and shall give Consultant a reasonable opportunity under the circumstances to respond to the request by redacting proprietary or other confidential information. Consultant waives any right to confidentiality of any document, e-mail or file it fails to clearly mark on each page as confidential or proprietary. In exchange, Consultant agrees to indemnify, defend, and hold harmless City for any claims by third parties relating thereto or arising out of (i) the City's failure to disclose such documents or information required to be disclosed by law, or (ii) the City's release of documents as a result of City's reliance upon Consultant representation that materials supplied by Consultant (in full or redacted form) do not contain trade secrets or proprietary information, provided that the City impleads Consultant and Consultant assumes control over that claim.
- 7.2 By execution of this Agreement, Consultant and his sub-consultant(s) grant the City a royalty-free, perpetual, irrevocable, and assignable license to use any and all intellectual property interest Consultant or his sub-consultant(s) possess to any drawings, details, specifications, documents, and other information created before each of their first involvement with the Project and subsequently incorporated into the Project's documents. City-furnished data that may be relied upon by Consultant is limited to the printed copies that are delivered to the Consultant pursuant to Article 2 of this Agreement. Any copyrighted electronic files furnished by City shall be used by Consultant only for the Project as described herein. City's posting or publication of such documents created by Consultant for City shall constitute fair use and shall not constitute an infringement of Consultant's copyright, if any.
- 7.3 Documents that may be relied upon by City are limited to the printed copies (also known as hard copies) that are signed or sealed by the Consultant. Files in electronic media format of text, data, graphics, or of other types that are furnished by Consultant to City are only for convenience of City, unless the delivery of the Project in electronic media format has been dictated in Attachment A, Scope of Services. Any conclusion or information obtained or derived from electronic files provided for convenience will be at the user's sole risk.
- 7.4 Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within sixty (60) days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. Unless stated otherwise herein, Consultant shall not be responsible to maintain documents stored in electronic media format after acceptance by City.
- 7.5 When transferring documents in electronic media format, Consultant makes no representations as to long term compatibility, usability, or readability, of documents resulting from the use of software application packages, operating systems, or computer hardware differing from that as required of, and used by, Consultant at the beginning of this Project.

- 7.6 City may make and retain copies of Documents for information and reference in connection with use on the Project by the City, or his authorized representative. Such Documents are not intended or represented to be suitable for reuse by City or others on extensions of the Project or on any other project. Any such reuse or modifications without written verification or adaptation by Consultant, as appropriate for the specific purpose intended, will be at City's sole risk and without liability or legal exposure to the Consultant or to Consultant's sub-consultants.
- 7.7 If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- 7.8 Any verification or adaptation of the Documents for extensions of the Project or for any other project will entitle Consultant to further compensation at rates to be agreed upon by City and Consultant.

ARTICLE 8. INSURANCE.

- 8.1 During the performance of the Services under this Agreement, Consultant shall maintain the following minimum insurance:
 - a) General Liability Insurance with a combined single limit of \$1,000,000 per occurrence and \$2,000,000 annual aggregate.
 - b) Automobile Liability Insurance with a combined single limit of \$1,000,000 for each person and \$1,000,000 for each accident.
 - c) Workers' Compensation Insurance Coverage A in accordance with statutory requirements and Coverage B, Employer's Liability Insurance, with a limit of \$500,000 for each occurrence.
 - d) Professional Liability Insurance with a limit of \$1,000,000 annual aggregate.
- 8.2 Consultant shall add the City an additional insured on all policies unless otherwise prohibited.
- 8.3 Consultant shall, upon execution of this Agreement, furnish City certificates of insurance, which shall include a provision that such insurance shall not be canceled without at least thirty (30) days' written notice to City.
- 8.4 No insurance, of whatever kind or type is to be considered as in any way limiting other parties' responsibility for damages resulting from their activities in the execution of the Project. City agrees to include, or cause to be included, in the Project's construction contract, such requirements for insurance coverage and performance bonds by the Project's construction contractor as City deems adequate to indemnify City, Consultant, and other concerned parties against claims for damages and to insure compliance of work performance and materials with Project requirements.

ARTICLE 9. PAYMENT.

- 9.1 City will pay Consultant for services and expenses in accordance with the Fee Schedule proposal submitted for the Project as part of the Scope of Services. Consultant's invoices will be presented at the completion of the work or monthly and will be payable upon receipt. Payment is due upon presentation of invoice and is past due thirty (30) days from invoice date. City shall give prompt written notice of any disputed amount and shall pay the remaining amount.
- 9.2 Consultant shall be paid in full for all services under this Agreement, including City authorized overruns of the Project budget or unforeseen need for Consultant's services exceeding the original Scope of Services.
- 9.3 TRAVEL; EXPENSES

City shall reimburse reasonable expenses, including travel and meals, when specified in the Scope of Services, but only in accordance with the City's Travel and Expense Policy and Procedures Manual. The maximum amount will be applied as of the date of travel and as listed in the per diem reimbursement rates on the "CONUS" website developed by the United States General Services Administration, located at www.gsa.gov [click on 'per diem rates' under the 'etools' category].

ARTICLE 10. MISCELLANEOUS PROVISIONS

- 10.1 EQUAL EMPLOYMENT OPPORTUNITY. In connection with this Agreement and the Project, City and Consultant shall not discriminate against any employee or applicant for employment because of race, color, sex, national origin, disability or marital status. City and Consultant will take affirmative action to ensure that the contractor used for the Project does not discriminate against any employee and employees are treated during employment without regard to their race, age, religion, color, gender, national origin, disability or marital status. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- 10.1.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.2 TITLE VI – CIVIL RIGHTS ACT OF 1964. City and Consultant shall comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), 49 C.F.R., Part 21, and related statutes and regulations.
- 10.2.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.3 NO THIRD PARTY RIGHTS CREATED. City and Consultant each binds itself and its successors, executors, administrators, permitted assigns, legal representatives and, in the case of a partnership, its partners, to the other party to this Agreement and to their successors, executors, administrators, permitted assigns, legal representatives and partners of such other party in respect to all provisions of this Agreement. The Services provided for in this Agreement are for the sole use and benefit of City and Consultant. Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than City and Consultant.
- 10.4 WARRANTIES/LIMITATION OF LIABILITY/WAIVER. City reserves all rights afforded to local governments under law for all general and implied warranties. City does not waive any rights it may have to all remedies provided by law and therefore any attempt by Consultant to limit its liability shall be void and unenforceable.

ARTICLE 11. EXTENT OF AGREEMENT:

- 11.1 APPLICABLE LAW/CHOICE OF FORUM AND VENUE. This Agreement is made under and will be construed in accordance with the laws of the State of Tennessee without giving effect to that state's choice of law rules. The parties' choice of forum and venue shall be exclusively in the courts of Williamson County, Tennessee. Any provision of this Agreement held to violate a law or regulation shall be deemed void, and all remaining provisions shall continue in force.
- 11.2 ENTIRE AGREEMENT. This Agreement, including these terms and conditions, represent the entire Agreement between City and Consultant for this Project and supersedes all

prior negotiations, representations or agreements, written or oral. This Agreement may be amended only by written instrument signed by City and Consultant.

ARTICLE 12. DISPUTE RESOLUTION, BREACH.

- 12.1 If a dispute should arise relating to the performance of or payment for the Services under this Agreement, the aggrieved party shall notify the other party of the dispute within a reasonable time after such dispute arises. During the pendency of any dispute, the parties shall continue diligently to fulfill their respective obligations hereunder. No arbitration or mediation shall be required as a condition precedent to filing any legal claim arising out of or relating to this Agreement. No arbitration or mediation shall be binding.
- 12.2 BREACH. Upon deliberate breach of the Agreement by either party, the non-breaching party shall be entitled to terminate the Agreement with notice, with all of the remedies it would have in the event of termination, and may also have such other remedies as it may be entitled to in law or in equity.

ARTICLE 13. SURVIVAL.

The provisions contained in this Professional Services Agreement shall survive the completion of or any termination of the Agreement, contract or other document to which it may accompany or incorporate by reference or which subsequently may be modified, unless expressly excepted from this Article upon consent of both parties.

CITY OF FRANKLIN, TENNESSEE:

ALFRED BENESCH & COMPANY:

By: _____
Dr. Ken Moore
Mayor
Date: _____

By: _____
Print: _____
Title: _____
Date: _____

Attest:

Eric S. Stuckey
City Administrator
Date: _____

Approved as to form:

Shauna R. Billingsley, City Attorney



Alfred Benesch & Company
8 Cadillac Drive, Suite 250
Brentwood, Tennessee 37027
www.benesch.com
P 615-370-6079
F 615-627-4066

October 14, 2019

Mr. Paul Holzen, PE
City of Franklin
109 Third Avenue South, Suite 142
Franklin, TN 37064

RE: Scope and Design Proposal
The Park at Harlinsdale Farm Multi-Use Path
Including a new pedestrian bridge over the Harpeth River
Franklin, TN

Dear Mr. Holzen:

In response to your request after the conclusion of the due diligence phase, I have attached a design scope for completing the full design services for the proposed multi-use path and pedestrian bridge in the Park at Harlinsdale in Franklin, TN. Included with this scope are separate scopes from CEC, Inc, Civil Infrastructure Associates (CIA), and Kiser Vogrin for their portion of the work.

If you have any questions or need additional information, please let me know. Thank you for the opportunity to serve the City of Franklin.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sammie McCoy".

Sammie McCoy, PE
Vice President
TN Division Manager



Alfred Benesch & Company
 8 Cadillac Drive, Suite 250
 Brentwood, Tennessee 37027
www.benesch.com
 P 615-370-6079
 F 615-627-4066

The Park at Harlinsdale Farm Multi-Use Path– City of Franklin

Proposed Scope and Estimate

Multi-Use Path over the Harpeth River

Benesch will develop plans for the multi-use path to connect the existing Ruby F. Lynch trail system to a trailhead parking lot within The Park at Harlinsdale Farm in Franklin. Throughout the design phase, Benesch will adhere to the TDOT Local Programs programmatic requirements as prescribed in the Local Government Guidelines Manual.

This work will include the design of a 12' wide concrete multi-use path with 1' un-paved shoulders on both sides to provide additional clearance from path appurtenances. The path will be approximately 2,100 LF with one bridge crossing over the Harpeth River. The proposed trail will connect to both the existing Ruby F. Lynch trail system and Claude Yates Drive on the west side of the Harpeth River and to a trailhead parking lot within The Park at Harlinsdale Farm on the east side of the river. Open drainage will be designed for the multi-use path. Design of water quality units or other water quality items are not included for the proposed drainage design.

Benesch will also coordinate and participate in the conceptual development of the extended trail to Claude Yates Drive. This portion of the trail will be designed as a separate plan set that can be bid locally by the City. Kiser Vogrin Design will complete the trail extension (see the attached scope from Kiser Vogrin Design for more details).

Benesch will provide utility coordination services for the full limits of the trail design to meet the requirements and procedures set out in TDOT's Local Government Guidelines Manual, Chapter 6: "Right-of-Way, Utility, and Railroad Procedures". Below is a generic example of items to be completed:

1. Notify in writing all utility companies (60-day response time)
2. 2nd Notice to all non-responsive utility companies (10-day response time)
3. Issue Preliminary Plans and solicit comments (2 possible utility meetings)
4. Issue ROW plans and timeline for relocation plans submittals
5. Review and approve relocation plans
6. Coordinate any contracts between the City and Utility
7. Package information for submittal to TDOT for Utility Coordination Conformance

Benesch will coordinate with Kiser Vogrin Design, Franklin Engineering and Parks Department to incorporate all aesthetic details and appurtenances. In general, this includes landscaping, decorative concrete (i.e. form liners, Inner-Urban Concrete detail), benches, bike racks and bollards (see the attached scope for more details).

Benesch will coordinate with the Parks Department regarding the installation of a possible connection path between the existing Ruby F. Lynch trail system located on the property of Chestnut Bend's subdivision and will show this in the plans as work to be completed by others.

Benesch will develop plans to accommodate the proposed emergency call box and will coordinate with the electric utility regarding the required electrical service near the bridge.

The multi-use path and bridge will accommodate the following items to be designed by others: A Franklin reclaimed water line, and potential electrical or fiber optic conduits. For purposes of this estimate these lines are



all assumed to be less than 8" diameters and can be versatile (i.e. internal bay is acceptable) in where they can be located.

The multi-use path design plans will be developed for each phase of development (Preliminary, ROW, Construction) in accordance to the format, standards, and specifications required by TDOT and further defined in the current version of the "TDOT Roadway Design Division – Roadway Design Guidelines" and other guidance provided by TDOT.

A standard Preliminary 30% set of plans that can be used for initial coordination with FEMA. Following FEMA coordination, the development of a 60% Right-of-Way/Utility set will occur. No Right of Way acquisition is anticipated as the work will be installed on property owned by the City of Franklin and/or the City's Parks Department. This 60% set will also be used for coordination with utility companies. The 100% construction documents will be produced for bidding. Probable construction costs will be estimated at the Right-of-Way and Construction stages of plans production. The plans will be developed for the project based upon the approved alignment. The multi-use path design parameters for the project will be based upon current versions of the following design guides; "Guide for the Development of Bicycle Facilities", American Association of State Highway and Transportation Officials; "LRFD Guide Specifications for the Design of Pedestrian Bridges, 2nd Edition", American Association of State Highway and Transportation Officials; "LRFD Bridge Design Specifications, 8th Edition", American Association of State Highway and Transportation Officials; "TDOT Standards Specifications for Road and Bridge Construction"; City of Franklin Street Standards. These technical guidelines and specifications shall be followed unless superseded by the standard for the City of Franklin.

The scope includes two Public Meetings, should these be deemed necessary, to inform the public about the project. The scope also includes four coordination meetings with City and Park staff to ensure that all elements are appropriately included. Benesch will assist city staff through-out the bidding phase of the project. This will include supplying all required documents in Portable Document Format (PDF) suitable for printing. Benesch will assist the city in producing the bid book. The bid book will be developed utilizing TDOT Local Program's Federal Proposal Contract. Benesch can organize and lead the pre-bid meeting and assist the city as necessary with opening and evaluating the bids once received.

The multi-use path design scope includes production of erosion control plans, pedestrian safety and signing during construction, permit applications and a SWPPP for the NPDES Permit. Any permit fees or third-party review fees shall be billed to the City as a reimbursable item.

Proposed New Bridge

The proposed structure has yet to be determined. It will be assumed for this scope that a maximum 900-foot-long, 6-span, prefabricated pedestrian bridge will be constructed. This crossing of the Harpeth River lies within a FEMA designated Zone AE floodplain. A hydraulic study will be required for this project to demonstrate that the proposed design will not increase the water surface Base Flood Elevation of the existing Flood Issuance Study (No Rise Condition). As part of our project, CEC, Inc. will perform the hydrologic analysis and develop hydraulic models for existing and proposed conditions (see attached scope). Benesch will coordinate preliminary structural design with CEC, Inc.



Structural Design Scope of Work

1. General Bridge Design: Assumed 900', maximum six span, prefabricated pedestrian bridge, and concrete substructures with drilled shaft foundations, H-Pile foundations, or spread footings on sound bedrock.
2. Preliminary bridge design
 - a. Final coordination with hydraulic design team to size the structure opening for the Harpeth River.
 - b. Coordination with multi-use path design to set centerline, profile, bridge width, approach limits, and phasing requirements. As noted in the section above the proposed width for the bridge will be 16' wide to accommodate the proposed 12' wide multi-use path, and 2' shoulders on both sides. The bridge will be designed to accommodate an H10 light-duty truck loading.
 - i. This will include evaluation of span pick points and need for crane pads that possibly might require extending past the top of bank for the Harpeth River
 - c. Coordination with the Parks Department to ensure that the multi-use path and bridge accommodate the multiple needs and uses of the park.
 - i. Potential horse trail will pass under the proposed bridge.
 - ii. Inclusion of aesthetic features on the pier (i.e. concrete form liners etc.).
 - d. Coordination with utility requirements to avoid conflicts and incorporation of utility conveyance needs into the proposed bridge design.
 - i. Potential 8" Reclaimed Water Line attachment.
 - ii. Potential Fiber Optic conduit attachment.
 - e. Coordination with environmental requirements regarding stream impact and substructure locations. This will include evaluation of need for haul road or pier construction access near the Harpeth.
 - f. Develop a preliminary structural design for:
 - i. Substructures: Abutments, piers, and foundation types
 - ii. Superstructure: Coordinate with prefabricated bridge suppliers
 - g. Coordination with Geotechnical Engineer for foundation recommendations
 - h. Development of preliminary plans including:
 - i. Preliminary Layout of Bridge
 - ii. Preliminary Bridge Cross Sections
 - iii. Accommodations for the utilities noted above
 - iv. Construction access plan



3. Final bridge design

- a. Develop final design for all structural elements as required
- b. Develop final plans for the structure in accordance with TDOT standards
- c. Incorporate the chosen form liner finishes and aesthetic elements selected by the City
- d. Incorporation of utility conveyance loads in design
- e. Tabulation of required quantities and assistance with cost estimates
- f. Submit all CAD files as required

Topographic Survey, Hydraulic Modeling, Environmental Services

1. CEC, Inc. will provide topographic survey, property line information for the project limits, and geotechnical staking. This survey will be performed to TDOT standards and be tied to TDOT State Plane Coordinates.
2. The CEC, Inc. scope includes the development of the necessary documents for the completion of the Programmatic or C-List CE and Agency Coordination for the project.
3. CEC, Inc. will complete a hydrologic and hydraulic analysis of the Harpeth River at the proposed crossing on the basis of the "2012 TDOT Design Procedures for Hydraulic Structures".
4. FEMA coordination will be coordinated by CEC, Inc. to cover the bridge construction over the Harpeth River. See the attached scope to be completed by CEC, Inc.

Landscape Architectural Services and Multi-Use Path Design to Claude Yates Drive

1. Kiser Vogrin Design's attached scope will include the design of the multi-use path from the Claude Yates Drive east, to a point approximately 500-ft from the west bank of the Harpeth River.
2. Kiser Vogrin Design's attached scope will also include the necessary landscape architecture services for the project.

Bridge Geotechnical Services

1. See attached scope and fee from CIA as needed to provide the geotechnical exploration and report for the construction of the bridge over the Harpeth River.

Items not included in the Benesch Scope

1. Stormwater quality design
2. Signal design or traffic studies
3. Irrigation design
4. Three-dimensional and/or perspective view concept renderings

10/14/2019



5. Utility design
6. Lighting design
7. Mitigation design for impacted environmental features.
8. Construction phase services or full TDOT level Construction Engineering and Inspection (CEI)
9. Bridge superstructure design. Bridge truss is anticipated to be a prefabricated unit that will be designed by a bridge manufacture chosen by the contractor based on the plan details.
10. Design for a potential overbank stream channel that might be required by the hydraulic study is not included in the current scope or estimate

Attachments:

1. Scope by CEC, Inc.
2. Scope by Kiser Vogrin Design (KVD)
3. Scope by Civil Infrastructure Associates (CIA)

Compensation:

Final Design Phase (Estimated for Planning Purposes)		
Multi-Use Path Design	Lump Sum	\$ 79,200.00
Bridge Design	Lump Sum	\$ 95,700.00
Bid Administration	Lump Sum	\$ 3,900.00
Geotechnical (By CIA)	Cost Plus	\$ 22,118.00
Survey (By CEC, Inc.)	Cost Plus	\$ 23,700.00
NEPA Document (By CEC, Inc.)	Cost Plus	\$ 81,400.00
Hydrologic & Hydraulic Analysis (By CEC, Inc.)	Cost Plus	\$ 25,000.00
FEMA CLOMR Submittal Package (By CEC, Inc.)*	Cost Plus	\$ 30,000.00
Path Extension to Claude Yates (By KVD)	Cost Plus	\$ 12,500.00
Landscape Architecture (By KVD)	Cost Plus	\$ 24,750.00
Estimated Final Contract Not-To-Exceed		\$ 398,268.00

*The LOMR Submittal package will follow construction of the bridge and improvements; therefore, the timing of this task is uncertain. CEC will provide a separate addendum for these services as the project nears completion.

The following is the compensation to be paid to Benesch for the scope items noted above. The only reimbursables that will be included on this project are permit fees, and third-part review fees which will be paid by Benesch and reimbursed at cost by the City. All other incidental costs (i.e. printing, travel, etc.) shall be included in the lump sum totals.

10/14/2019



307 Hickerson Drive
Murfreesboro, TN 37129
tel 615.663.7678
www.cia-engineers.com

October 8, 2019

Mr. Jake Williams, PE
Senior Project Manager
Alfred Benesch & Company, Inc.
8 Cadillac Drive, Suite 250
Brentwood, Tennessee 37027

**Re: *Proposal for Geotechnical Exploration Services
Harlinsdale Pedestrian Bridge
Franklin, Williamson County, Tennessee
CIA Proposal No. 2019299***

Dear Mr. Williams:

CIA, LLC is pleased to submit this proposal to provide geotechnical exploration services for the referenced project. This proposal is based on project information provided to us and presents our scope of services, fee, and schedule information.

PROJECT AND BACKGROUND INFORMATION

Initial project information was provided to us by Benesch during a telephone conversation and an email transmission on September 25, 2019. At that time, we were provided an aerial drawing showing six optional locations of the planned pedestrian bridge. We were instructed to provide a geotechnical scope that would be adequate for any of the six options.

Based on the provided drawing, we understand that a pedestrian bridge will be constructed over Harpeth River north of downtown Franklin. The project options include bridges ranging from approximately 350 to 830 linear feet in length and approach abutments on either side of the bridge. The bridge alignment and foundation locations have not yet been finalized.

SCOPE OF SERVICES

The goals of this exploration are to generally characterize site geologic conditions, determine lithology, evaluate soil and rock foundation conditions at the bridge abutments and retaining wall locations, and develop earthwork and foundation recommendations for the proposed construction. The assessment of environmental concerns is beyond the scope of the geotechnical exploration.

After review of the updated plan provided by Benesch, CIA plans to advance up to 12 borings which include proposed bridge abutments, bent locations, and potential embankments or walkway supports. All borings will be extended to auger refusal. The overburden at each drilled location will be drive-sampled in general accordance with ASTM D 1586 "Penetration Test and Split-Barrel Sampling of Soils." At select locations, we may attempt to obtain relatively undisturbed samples with thin-walled (Shelby) tubes. We plan to advance at approximately 10 borings into the

underlying rock approximately 10 feet by means of coring with the intent to extend through weathered rock intervals near the soil-rock interface documenting any irregularities in the coring process such as but not limited to loss in water circulation, rod drops, or other discontinuities in order to identify a competent foundation bearing elevation. Upon completion of boring advancement, each boring will be checked for the presence of groundwater and will then be subsequently backfilled with auger cuttings.

The estimated drilling quantities are presented in the attached cost estimate summary. CIA will monitor the exploration and adjust the exploration program to address any specific needs dictated by the subsurface conditions encountered. We will communicate the observed subsurface conditions to the design team and coordinate any adjustments to the exploration program and associated impacts to the budget and schedule for completion of the geotechnical exploration. No additional work that will require an increase in the budget for the geotechnical exploration will be initiated without prior approval.

Following completion of the field exploration, laboratory testing will be assigned to selected samples to assess the engineering characteristics of the overburden and bedrock. Laboratory index testing will be conducted to determine the natural moisture content, Atterberg limits, and grain size distribution of select soil samples recovered from the drilling operations. Additionally, select rock or soil specimens may be subjected to unconfined compressive strength testing to provide shear strength data to support design efforts. A portion of the strength testing performed on bedrock specimens may include the determination of stress-strain characteristics. Other tests may be required depending upon the subsurface conditions encountered.

No drilling activities will take place without proper coordination with current property owners. CIA will contact the Tennessee One Call System (811), the state-wide utility clearance coordinator for the State of Tennessee, to have the underground utilities marked prior to mobilization of the drilling equipment. The boring locations may be offset from the proposed locations to facilitate access and avoid marked utilities. CIA is not responsible for repair of utilities that are not properly identified by others at the time of our exploration.

A geotechnical report will be issued for the geotechnical exploration, outlining the scope of work performed as well as the results of the exploration and lab testing program. The report will address geotechnical aspects of bridge design and construction. The geotechnical reports will present our findings and will address, at a minimum, the following:

- General information regarding the site and subsurface conditions, including soil stratigraphy and bedrock occurrences, as well as groundwater measurements.
- Results of laboratory tests performed on selected samples.
- General comments regarding geology and geologic hazards, such as karst conditions.
- Recommendations for site preparation, including criteria for stripping, excavation, reuse of on-site materials as structural fill, undercutting of suitable materials and subgrade remedial treatments, and criteria for compacted fill.
- Recommendations for bridge foundation design and construction.
- Recommendations for embankment and walkway design and construction (if applicable).

- Recommendations for temporary and permanent groundwater control, if needed.

Additional comments/conditions upon which this proposal is based are as follows:

- We anticipate that the proposed exploration will be conducted within public right of way and City of Franklin property. If access to private property is required, we will make reasonable efforts to gain voluntary permissions for entry from private property owners, where appropriate. Benesch will be notified, as necessary, of any properties where such entry might be denied.
- We will measure from existing landmarks to establish the boring locations during field exploration. Determination of the exact boring locations and ground surface elevations is beyond this scope of services. This proposal does not include provisions for surveying efforts to establish the boring locations.
- Water for drilling purposes will be obtained from adjacent ponds, creeks, or rivers, if required.
- If traffic conditions or related concern for the safety of personnel working adjacent to and within existing roadways, CIA will coordinate activities with Benesch, The City of Franklin, or county personnel as applicable. A CIA professional will be dedicated to the field work on a full-time basis to coordinate safety procedures and drilling efforts. We do not anticipate that subcontracted traffic control will be required.
- The subsurface exploration will be planned and conducted in accordance with the Tennessee Department of Environment and Conservation General Permit for Surveying and Geotechnical Exploration. As such, installation and monitoring of erosion protection/siltation control measures by both subcontracted and CIA personnel may be required as part of the drilling program.
- The unit prices submitted in this proposal were derived based on the anticipated scope of work assuming the subsurface exploration program would be performed in the 2019 calendar year.
- We will retain the soil samples for 30 calendar days following the submittal of the geotechnical engineering report. After this time, the soil samples may be discarded unless directed otherwise.

FEE SCHEDULE AND AUTHORIZATION

It is our understanding that the geotechnical work will be contracted under a unit price contract. Based on our understanding of the project, our estimated fees are outlined below. A detailed cost estimate is attached.

1.00 Drilling Services	\$11,120.00
2.00 Laboratory Services	\$2,918.00
3.00 Engineering Services	\$8,080.00
Total Not-to-Exceed Costs	
	\$22,118.00

We will discuss with you any expected modifications in scope of services and fee if necessary.

Harlinsdale Pedestrian Bridge
October 8, 2019
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Closing

We appreciate the opportunity to support this design-build pursuit exploration and design efforts for this project and look forward to working with you in the future. If you have any questions, please feel free to contact our office.

Sincerely,
CIA, CIVIL INFRASTRUCTURE ASSOCIATES, LLC



Matt Bullard, PE
Vice President
Director of Geotechnical Services

Attachment:
Cost Estimate

Geotechnical Exploration and Engineering Professional Services
Harlinsdale Pedestrian Bridge
Franklin, Williamson County, Tennessee
Alfred Benesch & Company



COST ESTIMATE
10/8/2019

1.0 DRILLING SERVICES

		Qty.		Rate	Cost
1.1	Equipment Mobilization	1	\$ 800.00	each	\$ 800.00
1.2	On-site Project Professional	30	\$ 95.00	per hour	\$ 2,850.00
1.3	Soil Auger Drilling	180	\$ 14.00	per vertical foot	\$ 2,520.00
1.4	Rock Core Set-up	2	\$ 100.00	each	\$ 200.00
1.5	Rock Coring	100	\$ 42.00	per vertical foot	\$ 4,200.00
1.6	Water Hauling	1	\$ 250.00	per day	\$ 250.00
1.7	Shelby Tubes	5	\$ 60.00	each	\$ 300.00
SUBTOTAL					\$ 11,120.00

2.0 LABORATORY TESTING SERVICES

		Qty.		Rate	Cost
2.1	Natural Moisture Content	12	\$ 9.00	each	\$ 108.00
2.2	Sieve Particle Size Analysis (ASTM D 422)	2	\$ 80.00	each	\$ 160.00
2.3	Atterberg Limits (ASTM D 4318)	4	\$ 55.00	each	\$ 220.00
2.4	Unconfined Compression Test (Rock)	10	\$ 125.00	each	\$ 1,250.00
2.5	Unconfined Compression Test (Soil)	4	\$ 100.00	each	\$ 400.00
2.6	Triaxial Compression Test (CU)	3	\$ 260.00	each	\$ 780.00
SUBTOTAL					\$ 2,918.00

3.0 ENGINEERING SERVICES

		Qty.		Rate	Cost
3.1	Project Initiation, Coordination, and Utility Locates				
3.1.1	Project Professional	4	\$ 95.00	per hour	\$ 380.00
3.1.2	Senior Project Manager	2	\$ 185.00	per hour	\$ 370.00
3.2	Engineering Evaluations and Report Development, Bridge				
3.2.1	Project Professional	36	\$ 95.00	per hour	\$ 3,420.00
3.2.2	Senior Project Manager	14	\$ 185.00	per hour	\$ 2,590.00
3.2.3.	Principal Geotechnical Engineer	6	\$ 220.00	per hour	\$ 1,320.00
SUBTOTAL					\$ 8,080.00

	ESTIMATED TOTAL COST	\$ 22,118.00
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October 9, 2019

Sammie McCoy
Principal Engineer
Alfred Benesch & Company
8 Cadillac Drive, STE 250
Brentwood, TN 37027

Dear Mr. McCoy:

Subject: Proposal for Professional Services – Design Services
Harlinsdale Farm Pedestrian Trail and Bridge
Franklin, Tennessee
CEC Project 191-308

Civil & Environmental Consultants, Inc. (CEC) is pleased to submit to Alfred Benesch & Company (Benesch) this proposal for professional services associated with the design and permitting of a pedestrian trail and bridge at Harlinsdale Farm.

1.0 INTRODUCTION

CEC teamed with Benesch during the initial Due Diligence Phase to help determine the extent of future tasks, specifically determining an alignment for the pedestrian path and narrowing down the field survey and overall project area. CEC understands that the City desires the proposed greenway and bridge to result in a “No-Rise” condition. The scope below is based on the completion of the conceptual design during the Due Diligence Phase and our meeting with you and City staff on September 13, 2019, and represents our understanding of CEC’s proposed role as a subconsultant to Benesch. The proposed scope below includes services up to the completion of design of the pedestrian trail and bridge. Construction phase services are not included with this proposal.

1.1 Task 0002 – Topographical Survey

CEC proposes to perform a Topographic Survey of the area within the provided survey limits as shown on attached Figure 1. It is estimated that this total area consist of approximately 20 acres not including the area within the wood lines along the Harpeth River. A limited topographic survey will be completed for the river and surrounding wooded areas to encompass the location of the

Mr. McCoy – Alfred Benesch & Company
CEC Project 191-308
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proposed bridge. In addition to the topographic survey, CEC will complete six additional cross-sections along the Harpeth River to aid in the hydrologic and hydraulic analysis task.

CEC will utilize survey field technicians equipped with GPS, Robotics and Conventional Total Station surveying instruments to complete this task. This survey will be performed in accordance with the Tennessee Code Annotated Survey Standards of Practice and will include visible and/or marked utilities, adjacent roadway, building locations, existing site improvements, FEMA floodplain boundaries, and edge of tree drip lines. Invert elevations, pipe size and pipe material of the storm and sanitary sewer structures will be obtained if visible. Individual specimen trees with a diameter of twenty-four (24) inches or greater and aesthetic understory trees with a diameter of eight (8) inch or more measured at four-and-one-half feet above grade will be located. Contours will be generated at one-foot intervals. The survey will be referenced to the Tennessee State Plane Coordinate System (NAD83) and the North American Vertical Datum of 1988 (NAVD88, Geoid Model 12B) in US feet. CEC will provide the final deliverable in a CAD (*.dwg) 2018 format. Property Boundary and Access Easement document preparation are not included with this scope of services, but may be provided at an additional fee.

Utilities will be shown according to surface observations combined with plans and markings provided by calling the TN811. It is CEC's experience TN811 may not respond to a request for markings unless excavation activities are involved. TN811 does not mark utility lines or services on private property. The surveyor makes no guarantee that the utilities located comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the utilities located are in the exact location indicated. For utility lines or service locations on private property, CEC can retain the services of a private underground utility location service for an additional fee upon request.

It is understood that the client hereby grants CEC or represents and warrants (if the site is not owned by the client) that permission has been duly granted for a Right-of-Entry by our firm, agents, staff, consultants and subcontractors for the purpose of obtaining field information pertinent to the subject project.

1.2 Task 0003 – NEPA Document

The purpose of this Scope of Work (SOW) is to prepare a D-List CATEX document pursuant to the National Environmental Policy Act (NEPA) to analyze the potential impacts to the human and natural environment for the proposed greenway and bridge over the Harpeth River at Harlinsdale Farm in Franklin, Williamson County Tennessee. This CATEX document will also include National Historic Preservation Act – sec 106, Endangered Species Act – Section 7, and USDOT sec 4f evaluation/documentation.

Mr. McCoy – Alfred Benesch & Company
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The D-List CATEX document will be prepared per Council of Environmental Quality (CEQ), Federal Highway Administration (FHWA) and Tennessee Department of Transportation (TDOT) NEPA regulations and guidance documents. The Section 106 evaluation will be prepared as per 36 CFR 800, and all the relevant data and analysis will be prepared as per the National Historic Preservation Act and procedures described in 36 CFR 800. Endangered Species be considered in accordance with Section 7 of the Endangered Species Act. The Section 4(f) evaluation will be prepared as per U.S DOT regulations.

The purpose of this task is to perform an environmental review and coordination in pursuit of a Categorical Exclusion. The following subtasks will be conducted for this project.

1. Project Management
2. Purpose and Need Statement
3. Data Collection
4. Environmental Assessment/Environmental Impacts
5. Draft D-List CATEX
6. Final D-List CATEX

NEPA, AASHTO, FHWA, Federal, State and Local rules and regulations will be followed in this task.

Develop Purpose and Need

CEC will develop a draft Purpose and Need Statement in close coordination with agency staff and other key stakeholders. The Purpose and Need statement will be consistent with guidance available through the FHWA technical advisory.

Data Collection

As part of the preparation of the environmental documentation, individual technical studies will be considered and, if required, undertaken to analyze and assess the existing conditions and environmental consequences of the potential impacts of the proposed project. Data collection will be carried out, at varied degrees, according to NEPA, Federal, and State regulations and requirements and may include:

1. Social impacts – Environmental Justice Impacts
2. Economic Impacts
3. Land Use Impacts
4. Local Accessibility and Travel Patterns

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5. Public Facilities and Services
6. Relocation Impacts
7. Section 4(f) of the Department of Transportation Act of 1966
8. Section 6(f) of the Land and Water Conservation Fund Act of 1966
9. Air Quality Analysis
10. Noise Impacts Evaluation
11. Impacts on Cultural Preservation (Section 106) – Archaeological Resources and Historical Resources
12. Farmland Protection
13. Ecological Impacts
14. Terrestrial
15. Aquatic
16. Wetlands
17. Floodplain Impacts
18. Endangered and Threatened Species (Section 7)
19. Hazardous Waste Impacts
20. Indirect and Cumulative Impacts

Assessment/Environmental Impacts

For items noted in Data Collection that will require analysis, a brief reader-friendly technical report will be prepared. This summary will assist in the development of the D-List CATEX. The technical reports will undergo a thorough editorial review prior to formal submittals. These technical reports will be included as appendices to the NEPA document. Coordination with various resource/regulatory agencies as well as outreach to affected stakeholders and public involvement activities will be undertaken as part of the environmental process to achieve timely and efficient identification, evaluation, and resolution of environmental and regulatory issues.

Upon completion of background investigation and onsite reconnaissance, CEC will determine potentially significant issues to be analyzed in the Draft D-List CATEX. The results of the background investigation and reconnaissance will be forwarded to TDOT for comment prior to including them in the CATEX.

Draft Categorical Exclusion

CEC staff will prepare a Draft D-List CATEX for submittal to TDOT for review and comment, as required by the TDOT Project Manager.

Mr. McCoy – Alfred Benesch & Company
CEC Project 191-308
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October 9, 2019

Final Categorical Exclusion

Upon receiving comments on the Draft CATEX from TDOT, CEC will finalize the CATEX document. CEC intends and has allotted for one (1) revision of the Draft CATEX to produce the Final CATEX following review comments from TDOT and its agents.

Assumptions

Public Involvement and Interagency Coordination – The CEC team will hold and arrange, if required, at least one public meeting during the project for NEPA Document purposes. Agency coordination will include coordination with TDEC, USACE, SHPO, TWRA, USFWS, and other related Federal and State agencies. Agency meetings will be held.

Bat Habitat – CEC understands that the purpose of the project is to gain Indiana bat/Northern long-eared bat clearance to construct the bridge over the Harpeth River. In order to gain clearance, the potential impacts to the federally endangered Indiana bat and federally threatened Northern long-eared bat must be given adequate consideration. CEC is prepared to conduct a mist net survey for the potential tree clearing activity associated along the project area. The proposed survey work is based on the technical criteria outlined in the USFWS 2016 Indiana Bat Summer Survey Guidance.

If the Indiana and/or Northern long-eared bat are captured in the project alignment, CEC will attach a transmitter and conduct a telemetry survey and emergence counts per the 2016 Bat Survey Guidance. Telemetry and emergence counts are not included in this scope of work and will be re-evaluated if an Indiana and/or Northern long-eared bat are captured.

Historic/Cultural Resources – Cultural/Historic Resources evaluation will be performed consistent with the Sec 106 of the National Historic Preservation Act (NHPA). Appropriate Area of Potential Effect (APE) will be developed in consultation with SHPO, FHWA, ACHP (if applicable) and other consulting parties. If the file review with SHPO indicates the potential presence archeological resources, a full archaeological report may be required as such, a supplemental fee will be necessary.

1.3 Task 0004 – Hydrologic and Hydraulic (H&H) Analysis

CEC will perform the hydrologic and hydraulic analysis in accordance with standard engineering practice, “*TN NFIP Guidance Document: No-Rise Submittals*” and FEMA’s “*Instructions for Completing the Application Forms for Conditional Letters of Map Revision and Letters of Map Revision*” (rev. 04/2017). The hydrologic and hydraulic analysis is based on the following assumptions:

Mr. McCoy – Alfred Benesch & Company
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- FEMA’s Harpeth River steady state hydraulic model in HEC-RAS format is available to CEC and is consistent with FEMA’s corresponding effective FIS and effective FIRM dated December 22, 2016.
- The field run survey combined with current City of Franklin LiDAR data will be sufficient for the mapping needs.
- No new hydrologic flows will be determined for Harpeth River. The hydraulic analysis will use the same flows from the effective hydraulic model that supports FEMA’s corresponding FIS and FIRM dated December 22, 2016.
- Sediment transport modeling is not required.
- The water surface profile hydraulic model and floodway hydraulic model for each of the following conditions will be evaluated.
 - Effective FEMA hydraulic analysis which supports FEMA’s effective FIS and FIRM dated December 22, 2016.
 - Existing site conditions of the subject property.
 - Future site conditions of the subject properties reflecting the design of the proposed greenway bridge over the Harpeth River.
- CEC has included up to three (3) iterations between the proposed future site layout/grading and the hydraulic analysis of the existing condition and assumes Benesch will provide necessary information in .dwg format for the proposed conditions. If additional iterations are necessary, they can be performed on a Time and Materials basis after receiving approval from Benesch.
- Any modifications to the proposed future site layout/grading that affect the hydrologic and hydraulic analysis after the preparation of the submittal packages have begun will be considered additional services that can be performed on a Time and Materials basis after receiving approval from Benesch.
- CEC has assumed that the reach for which detailed analysis will be done is limited to Harlinsdale Park and generally includes the same area for which CEC previously performed preliminary hydraulic analysis.

1.4 Task 0005 – Proposed Future Development Submittal Package (CLOMR)

Based on the results of the hydrologic and hydraulic analysis of the current and proposed future site conditions, CEC will prepare a CLOMR submittal package based on our understanding of the City’s requirement to update the FIRM even if the proposed development is found to have a “No-Rise” condition. The CLOMR submittal package, if a “No-Rise” is applicable, will be prepared in accordance to the “*TN NFIP Guidance Document: No-Rise Submittals*”. The CLOMR submittal package will also be prepared in accordance to FEMA’s “*Instructions for Completing the*

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Application Forms for Conditional Letters of Map Revision and Letters of Map Revision” (revised 04/2017).

Utilizing the results of the hydrologic and hydraulic analysis, CEC will perform the following:

- Prepare a project narrative describing the current site conditions, previous development on the site, the future proposed site development, and modeling methodology.
- Develop a topographic working map showing the proposed 1%-annual-chance (100-yr) floodplain and floodway boundaries and the proposed 0.2%-annual-chance (500-yr) floodplain boundary.
- Prepare cross-section plots showing the proposed 1%-annual-chance (100-yr) floodplain and floodway boundaries and water surface elevations and the proposed 0.2%-annual-chance (500-yr) floodplain boundary and water surface elevation.
- Include the property survey in the submittal package. CEC assumes a current plat for the property is available and will be considered “current and accurate” by the local floodplain administrator for the purposes of the “No-Rise” Certification and by FEMA for the purposes of the CLOMR submittal.
- For the CLOMR submittal package.
 - o Prepare a “No-Rise” Certification, if applicable.
 - o Prepare FEMA’s MT-2 forms.
 - o Develop an annotated FIRM showing the proposed 1%-annual-chance (100-yr) floodplain and floodway boundaries and the proposed 0.2%-annual-chance (500-yr) floodplain boundary.
 - o Prepare the City’s Floodplain Development Permit Application.
 - o Meet with the City’s Floodplain Administrator to discuss the hydrologic and hydraulic analysis, CLOMR submittal package, and FEMA’s Community Acknowledgment Form.
 - o Submit the CLOMR submittal package to the City for review and approval. CEC understands the City may forward the applicable submittal package to TN NFIP Office for review as well. The scope includes addressing one set of comments from the City and TN NFIP.
 - o Submit the CLOMR submittal package to FEMA for review and approval. This submittal will be an online submittal. The scope includes addressing one set of comments from FEMA. Additional comments/responses with FEMA, if required, will be billed on a Time and Materials basis after receiving approval from Benesch.
 - o The City will pay the required **FEMA CLOMR submittal fee of \$7,000 (plus \$60/hr)** (<https://www.fema.gov/flood-map-related-fees>) for the online submittal of the LOMR. FEMA requires that payment for online submittals be made online via

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e-check or credit card. The City may provide CEC with a written check to be made payable to the “National Flood Insurance Program” along with permission for CEC to submit the payment to FEMA electronically. If CEC pays the FEMA CLOMR submittal fee and then invoices Benesch, a 12% administrative fee will be applied.

This submittal fee is not included in the estimated cost for this task.

- o The CLOMR submittal package requires individual notification of affected property owners by the local government based on the extent of impacts the previous development activities have had on the water surface elevation of the Harpeth River for the 1%-annual-chance (100-year) flood event and regulatory floodway. This task includes preparation of the property owner notifications or public notice, if required. CEC has included an allowance of \$500 for postage, advertisement fees, and other reimbursable associated with the notifications in the estimate cost for this task.

1.5 Task 0006 – Post Development Submittal Package (LOMR)

This task includes the preparation of a FEMA LOMR submittal following completion of the CLOMR submittal process outlined in Task 0005, receipt of a CLOMR from FEMA, and the completion of the proposed construction. The scope of services for this task is based on the following additional assumptions:

- CEC will perform an “as-built” topographic survey of the subject properties, after construction of the proposed greenway, bridge and park improvements are complete. The survey will be provided in CAD format, including survey points with elevations, using Tennessee State Plane coordinates, NAD83, NAVD88, Zone 4100/5301. A signed and sealed PDF version of the current “as-built” topographic survey will also be provided for the submittal packages.
- There are no substantial changes between the proposed construction of the project used for the CLOMR modeling and the actual conditions in the LOMR modeling.
- The Duplicate Effective, Corrected Effective, Existing, and Proposed Conditions Models and the Endangered Species Act Compliance Documentation that were included with the CLOMR submittal will not require revision for the LOMR submittal package.
- The LOMR submittal will require less coordination with FEMA and with the City than the CLOMR process required.

CEC will perform the following:

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- Revise the hydrologic and hydraulic analysis from Task 0004 based on the “as-built conditions.”
- Revise the project narrative describing the “as-built” project and modeling methodology.
- Develop a topographic working map showing the proposed 1%-annual-chance (100-yr) floodplain and floodway boundaries and the proposed 0.2%-annual-chance (500-yr) floodplain boundary.
- Prepare cross-section plots showing the proposed 1%-annual-chance (100-yr) floodplain and floodway boundaries and water surface elevations and the proposed 0.2%-annual-chance (500-yr) floodplain boundary and water surface elevation.
- Include the property survey, provided by others, in the submittal package. CEC assumes a current plat for the property is available and will be considered “current and accurate” by the local floodplain administrator for the purposes of the “No-Rise” Certification and by FEMA for the purposes of the LOMR submittal.
- Prepare FEMA’s MT-2 forms.
- Develop an annotated FIRM showing the proposed 1%-annual-chance (100-yr) floodplain and floodway boundaries and the proposed 0.2%-annual-chance (500-yr) floodplain boundary.
- Meet with the City’s Floodplain Administrator to discuss the hydrologic and hydraulic analysis, LOMR submittal package, and FEMA’s Community Acknowledgment Form.
- Submit the LOMR submittal package to the City for review and approval. CEC understands the City may forward the applicable submittal package to TN NFIP Office for review as well. The scope includes addressing one set of comments from the City and TN NFIP.
- Submit the LOMR submittal package to FEMA for review and approval. This submittal will be an online submittal. The scope includes addressing one set of comments from FEMA. Additional comments/responses with FEMA, if required, will be billed on a Time and Materials basis after receiving approval from Benesch.
- The City will pay the required **FEMA LOMR submittal fee of \$8,000** (<https://www.fema.gov/flood-map-related-fees>) for the online submittal of the LOMR. FEMA requires that payment for online submittals be made online via e-check or credit card. The City may provide CEC with a written check to made payable to the “National Flood Insurance Program” along with permission for CEC to submit the payment to FEMA electronically. If CEC pays the FEMA LOMR submittal fee and then invoices Benesch, a 12% administrative fee will be applied. **This submittal fee is not included in the estimated cost for this task.**
- The LOMR submittal package requires individual notification of affected property owners by the local government based on the extent of impacts the previous development activities have had on the water surface elevation of the Harpeth River for the 1%-annual-chance

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(100-year) flood event and regulatory floodway. This task includes preparation of the property owner notifications or public notice, if required.

2.0 **SCHEDULE**

Task	Estimated Start	Estimated Duration*
0002 – Survey	Within 10 business days of Notice to Proceed	45 business days, weather permitting
0003 – NEPA Document	Within one week of receipt of completed survey and additional data Benesch is providing	6 Months
0004 – Hydrologic and Hydraulic Analysis	Within one week of receipt of completed survey and additional data Benesch is providing	Six Weeks
0005 – Proposed Future Development Submittal Package	After completion of Hydraulic Analysis of future site conditions	Three weeks to prepare submittal package 30+ day - City review 90+ days - FEMA review
0006 – Post Development Submittal Package	Within two weeks of receipt of completed “As-Built” Survey	Four weeks to prepare submittal package 30+ day - City review 90+ days - FEMA review

* Items involving government agencies or regulatory approvals are beyond CEC’s scheduling control.

3.0 **AGREEMENT & FEE**

Our estimated costs are based on the scope of services described above and will be billed on a Time & Materials basis. If CEC encounters conditions that require additional services and costs beyond what is presented in the proposal, CEC will provide a written revised scope of services and revised costs for Benesch’s approval prior to proceeding. The estimated cost to perform the scope of services outlined above is provided below:

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Task	Estimated Fee
0002 – Topographic Survey	\$23,700.00
0003 – NEPA Document	\$81,400.00
0004 – H&H Analysis	\$25,000.00
0005 – Proposed Development Submittal Package	\$30,000.00
0006 – Post Development Submittal Package	TBD*
Total	\$160,100.00
Estimated Submittal Fees for CLOMR Package**	\$7,000.00

* The Post Development submittal package will follow construction of the bridge and improvements; therefore, the timing of this task is uncertain. CEC will provide the cost as the project nears completion in a separate proposal.

** FEMA Submittal Fees to be paid directly by the City of Franklin as outlined above.

Invoicing of professional services will be in accordance with the attached fee schedule. Reimbursable expenses will be billed per the fee schedule and subcontracted services will be invoiced at cost, plus a 12% administrative fee.

Our Schedule of Terms and Conditions, which were agreed upon with the original proposal, still apply. Any changes to our T&C must be agreed to in writing by both parties prior to your authorization to proceed. Your oral or written authorization to proceed will form a binding contract and indicates your acceptance of our Terms and Conditions.

4.0 CLOSING

CEC appreciates the opportunity to provide this proposal to Alfred Benesch & Company. If you should have any questions, please do not hesitate to contact us at (615) 333-7797.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.



Eric Gardner, P.E., CPESC
 Senior Project Manager



Steven E. Casey, P.E., CPESC
 Senior Principal

Enclosures

FIGURE 1

Additional Limits Needed to account for path extension to Claude Yates Dr. this will include surveying to the west side of the roadway.

Survey Limits Needed without additional area for path to Claude Yates Dr.

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
 325 SEABOARD LANE • SUITE 170
 FRANKLIN, TENNESSEE 37067
 PHONE: 615-333-7797 • FAX: 615-333-7751
 E-MAIL: nashville@cecinc.com

City of Franklin Services

Fee Schedule

January 1, 2019 through December 31, 2019

PROFESSIONAL SERVICES

Classification	Rate/Hour
Senior Principal.....	\$222
Principal.....	\$202
Senior Project Manager	\$176
Project Manager III	\$166
Project Manager II	\$151
Project Manager I	\$137
Assistant Project Manager	\$113
Project Consultant / Geologist / Ecologist / Environmental Scientist.....	\$106
Staff Consultant / Geologist / Ecologist / Environmental Scientist	\$99
Designer	\$107
Draftsperson / CADD Operator.....	\$68
Senior Field Technician.....	\$84
Environmental Technician./ Intern.....	\$52
Senior Land Surveyor	\$141
Assistant Project Surveyor.....	\$102
Survey Technician IV	\$96
Survey Technician III.....	\$86
Survey Technician II.....	\$76
Survey Technician I.....	\$66
Administrative Assistant	\$66
Administrative Manager	\$76

DIRECT EXPENSES

Printing and Reproduction *
 Miscellaneous Reimbursables *

* As directed by the City Engineer on a project-by-project basis

SUBCONTRACT SERVICES

Services @ Cost Plus 10%



April 4, 2019
 Revised April 26, 2019
 Revised October 11, 2019

Sammie E. McCoy, PE, Vice President – TN Division Manager
 Alfred Benesch & Company
 Creekside Crossing III
 8 Cadillac Drive
 Suite 250
 Brentwood TN 37027

RE: **Park at Harlinsdale Farm Pedestrian Bridge & Trails**
Franklin, TN
 KVD Project No.: 19029

Site Design Services Agreement

In accordance with your request, please find below our proposal for Landscape Architectural Design Services for the proposed Park at Harlinsdale Farm Pedestrian Bridge and Trails system located in Franklin, TN. Hereinafter, Planner/Landscape Architect shall be defined as **Kiser + Vogrin Design, LLC (KVD)** and **Alfred Benesch & Company** shall be defined as **Client**. **City of Franklin** shall be defined as the **owner**.

Project Description and Understanding

We understand the Client desires to undertake the exercise of site design and construction documents for:

- Pedestrian Bridge over the Harpeth River;
- Trail connection from the existing Chestnut Bend Subdivision Trail system to a proposed City of Franklin trail extending to the Pedestrian Bridge;
- Proposed trail system from the Pedestrian Bridge to the Inter Urban Trail and existing ADA parking lot on the Park at Harlinsdale Farm;
- Proposed Pedestrian Trail on City of Franklin property to Claude Yates Drive and Cheek Park;
- Final Construction Design Documents to build the proposed pedestrian bridge and trail systems and associated environs;
- Coordination Meetings with City Officials
- Public Meetings

Based on this understanding KVD proposes to provide the following planning and design:

I. Basic Scope of Services

A. Pre-Planning/Due Diligence Services

(KVD Phase 010)

Pre-Design and Due Diligence services includes the research, collection and analysis of available physical site data (e.g. boundary & topographical surveys) and local municipal policies (e.g. zoning ordinance, stormwater and land use regulations) that have potential impact on the proposed plan or development. It will include a site visit to familiarize ourselves with the physical setting of the site and initial meeting with the local municipal leaders (e.g. Planning/Engineering and Parks Departments) will be undertaken as well.

KVD will coordinate with the Client to obtain, review, analyze and/or produce the following as is applicable:

1. Project Administration

- Initial Kick-off project review meeting to include project programming with the Client and City of Franklin, entitlement process determination and estimated timeline development;
- Initial project vetting & coordination with City of Franklin;
- Allied consultant coordination and review w/ Client and City of Franklin.

2. Site Visit

KVD will conduct a site visit to review the physical characteristics of the site and surrounding areas and to evaluate unique features that might be the focus of special areas as the conceptual land planning develops. This visit will typically focus on the following:

- Property edges and study limits;
- Topography and extreme grade changes;
- Hydrology (drainage ways and water features);
- Vegetation (cover and characteristics);
- Access routes;
- Visually discernable utilities (for visual impact understanding);
- Visually discernable historic and cultural sites and landmarks;

B. Pedestrian Bridge and Trails Schematic/Construction Design Services

(KVD Phase 040)

KVD shall prepare Schematic/Construction Design using the data and information gathered above and database as prepared by the client to denote schematic design of the Pedestrian Bridge, Trail System, Trailheads, Pedestrian Access Points and ancillary environs to review with the Client/Design Team and City of Franklin to gain feedback prior to the preparation of the Construction Documents.

1. Pedestrian Bridge & Trails Network Schematic Design

KVD shall collaborate and provide input with the Design Team and will specifically explore and address:

- Pedestrian Bridge location;
- Vehicular & pedestrian circulation;
- Trail/Bridge Landscape design;
- Bike rack locations;
- Specialty paving;
- Bollard locations;
- Trailhead markers;
- Emergency Call Box location;
- Mitigation landscape;
- Pedestrian Bridge design elements and character;
- Materials selections;
- Pedestrian Access ramps;
- Ancillary environs

1. KVD will engage in the schematic design (SD) phase where KVD works with the Client and owner to define the landscape/hardscape program, determine goals and requirements, and illustrate the required functions of the project. Schematic design will produce enough detail and imagery so that the Client will understand the proposed design of general areas and rough dimensions of all major design elements. In this phase, KVD will develop study drawings, documents, or other media that illustrate the concepts of the design and include spatial relationships, scale, and form for the Client to review.
2. KVD shall prepare up to two (2) schematic design plans for the pedestrian bridge/trails network and associated environs. KVD shall coordinate the efforts of the Design Consultant Team and meet with the Client & City of Franklin to review these studies, explore options and formulate plans to develop the chosen concepts (parts & pieces) into a physical plan of development;

KVD and the Client will present and review the completed Schematic Plan with Owner to determine "next steps" and departure point for preparation of Construction Documents.

2. Construction Document Services

Based on the Client review and feedback of the Schematic Design package KVD will enter into

the Construction Documents phase of services. KVD will prepare Construction Documents consisting of drawings setting forth in detail the requirements for bidding, negotiation and construction by others.

It is anticipated that these documents will include the following:

- **Overall Landscape/Hardscape Site Plan:** KVD shall prepare an Overall Hardscape/Landscape Site Plan at an appropriate scale depicting the design intent of and identifying all proposed hardscape/landscape elements within the site. These plans will be coordinated with the team Civil Engineering documents and will include appropriate notes, schedules and detail keys;
- **Staking/Layout Plan:** KVD shall prepare staking and layout plans giving sufficient dimensional information for the contractor to horizontally locate the proposed hardscape features and landscape elements;
- **Construction Details:** KVD shall prepare elevations, sections, plans, details and/or specifications of the proposed hardscape areas, landscape features, and site furnishings and provide sufficient information for their construction and/or installation as designed by KVD;
- **Landscape Plan:** KVD shall prepare landscape plans. These plans shall indicate the location, quantity and arrangement of all plant material including installation details and plant material schedules.

C. Claude Yates Trails Schematic/Construction Design Services

(KVD Phase 042)

KVD shall prepare Schematic/Construction Design using the data and information gathered above and database as prepared by the client to denote schematic design of the proposed +/-1,900 LF of Trail System from the shared connection at Chestnut Bend to Claude Yates Drive/Cheek Park with ancillary environs to review with the Client/Design Team and City of Franklin to gain feedback prior to the preparation of the Construction Documents.

1. Trails Schematic Design

KVD shall collaborate and provide input with the Design Team and will specifically explore and address:

- Vehicular & pedestrian circulation;
- Landscape design;
- Bollard locations;
- Trailhead markers;
- Emergency Call Box location;
- Materials selections;
- Pedestrian Access ramps;
- Ancillary environs

KVD will engage in the schematic design (SD) phase where KVD works with the Client and owner to define the landscape/hardscape program, determine goals and requirements, and illustrate the required functions of the project. Schematic design will produce enough detail and imagery so that the Client will understand the proposed design of general areas and rough dimensions of all major design elements. In this phase, KVD will develop study drawings, documents, or other media that illustrate the concepts of the design and include spatial relationships, scale, and form for the Client to review.

KVD shall prepare up to two (2) schematic design plans for the trails network and associated environs. KVD shall coordinate the efforts of the Design Consultant Team and meet with the Client & City of Franklin to review these studies, explore options and formulate plans to develop the chosen concepts (parts & pieces) into a physical plan of development;

KVD and the Client will present and review the completed Schematic Plan with Owner to determine "next steps" and departure point for preparation of Construction Documents.

2. Construction Document Services

Based on the Client review and feedback of the Schematic Design package KVD will enter into the Construction Documents phase of services. KVD will prepare Construction Documents consisting of drawings setting forth in detail the requirements for bidding, negotiation and construction by others.

It is anticipated that these documents will include the following:

- **Overall Landscape/Hardscape Site Plan:** KVD shall prepare an Overall Hardscape/Landscape Site Plan at an appropriate scale depicting the design intent of and identifying all proposed hardscape/landscape elements within the site. These plans will be coordinated with the team Civil Engineering documents and will include appropriate notes, schedules and detail keys;
- **Staking/Layout Plan:** KVD shall prepare staking and layout plans giving sufficient dimensional information for the contractor to horizontally locate the proposed hardscape features and landscape elements;
- **Construction Details:** KVD shall prepare elevations, sections, plans, details and/or specifications of the proposed hardscape areas, landscape features, and site furnishings and provide sufficient information for their construction and/or installation as designed by KVD;
- **Landscape Plan:** KVD shall prepare landscape plans. These plans shall indicate the location, quantity and arrangement of all plant material including installation details and plant material schedules.

D. Administration of the Construction Contract

(KVD Phase 050)

KVD will provide site development Construction Administration Services, per the Clients request, including contract bidding & negotiating assistance and installation inspection.

Our services may typically include:

- Consultation, coordination and participation in the bidding/negotiation of the Construction Contract;
- Request for Information (RFI) services;
- Site visits to the site to familiarize ourselves with the progress and quality of the Work to determine if the Work is proceeding in accordance with the Contract Documents;
- Rendering opinions on claims of the Client or Contractor relating to the execution and progress of the work;
- Review of shop drawings, samples and other submissions of the Contractor for conformance with the intent of the plans, details and specifications;
- Installation reviews to determine the dates of Substantial Completion and Final Completion; review of written guarantees and related documents and advising the Owner on the issuance of a final Certificate for Payment;
- Attendance at site construction meetings, as needed or required, with the Client and contractor during the course of site operations;
- Coordination with the general contractor or sub-contractors during the construction and installation of the construction documents;

In all instances regarding construction and/or installation of the project, KVD shall not be responsible for the acts or omissions of the Contractor, Subcontractor, or any of the Contractor's or Subcontractor's agents, employees, or any other persons performing any of the work.

E. Meetings & Permit Coordination

(KVD Phase 070)

1. KVD will act in the capacity of sub consultant for the above described services and activities and will coordinate with all other team consultants as deemed necessary thru the completion of these services to obtain permits required. Plans Submittals shall include one (1) set of staff review comment redline revisions and one (1) set of final Conditions of Approval revisions for

submittal with the One Stop review process. Additional staff comments/conditions in addition to the above shall be addressed and provided as an hourly service per our Exhibit A attached.

2. Beyond the initial Kick-off Meeting, KVD will attend and participate in up to 3 (three) meetings with the Client, Design Team and others as determined by the Client to review the program and progress plan updates, provide input into phasing, layout, budget, and other plan considerations and will represent the Client and his interests in furthering the successful planning of this project;
3. KVD shall attend 2 (two) public meetings.
4. Additional meetings in addition to the above shall be addressed and provided as an hourly service per our Exhibit A attached.

II. Project Exclusions

The following are services specifically excluded from this proposal. If, during the course of rendering our services it appears that additional services may be required, KVD will immediately provide this information to the Client for his consideration and resolution.

These exclusions include:

1. Services not specifically listed under Basic Scope of Services provided by KVD and outlined above;
2. Geotechnical, architectural, structural, and mechanical engineering design services;
3. Electrical Engineering design and photometric planning;
4. Irrigation design;
5. Lighting Design;
6. Off-site (outside the project boundaries) landscape architectural design services;
7. Construction Administration and TDOT CEI.

III. Client Expectations & Responsibilities

1. The Client shall provide full and complete information, including a development program and any associated budgets, regarding his requirements for the Project;
2. The Client shall be responsible for all costs associated with any application and/or entitlement fees associated with KVD's Services;
3. The Client is responsible for payment of KVD invoices upon issuance. KVD will submit monthly invoices to the Client via email. We reserve the right to suspend our work in the event the account falls into arrears until such time the account is made current.

IV. Contract Fee and Billing

The Client shall compensate Kiser + Vogrin Design, LLC for the Basic Scope of Services described above and in accordance with the Terms and Conditions of this Agreement as follows:

	Service	KVD Phase*	Contract Type	Fee**
A	Pre-Planning/Due Diligence Services	010	Cost Plus	\$1,500
B	Pedestrian Bridge and Trails Schematic/Construction Design Services	040	Cost Plus	\$15,500
C	Claude Yates Trails Schematic/Construction Design Services	042	Cost Plus	\$12,500
D	Meetings & Permit Coordination	070	Cost Plus	\$3,500
E	Administration of the Construction Contract	050	Cost Plus	\$2,500
	Reimbursables			\$1,750

* Phase numbers are assigned for KVD in-house accounting purposes and will be reflected on future invoices.

***KVD shall provide these services as requested per the client and shall bill on an hourly basis with associated reimbursable expenses.*

All work will be performed according to our Standard Terms and Conditions of Contract, incorporated into this agreement by reference herein and attached as Exhibit A. Your execution of this Site Consultation Services Agreement acknowledges your receipt of these Standard Terms and Conditions and agreement to them.

If this Proposal is acceptable and outlines our complete agreement, please signify your acceptance by signing in the space provided on this Site Consultation Services Agreement and return to our office. Email followed by hard copy is acceptable. We are prepared to begin our services upon receipt of this signed Agreement.

We appreciate the opportunity to provide this proposal and look forward to working with you.

Kiser + Vogrin Design, LLC

Alfred Benesch & Company

By: Gary M. Vogrin
Member/Vice President

Authorized Agent _____ Date _____

CITY OF FRANKLIN, TENNESSEE
PROFESSIONAL SERVICES AGREEMENT
COF Contract No. 2019-0318

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and CDM SMITH hereinafter referenced as Consultant, who mutually agree as follows:

DECLARATIONS. City desires to retain Consultant to provide engineering, related technical, and other services in connection with City's project hereinafter referenced as Project. The Project is described as follows:

FINAL DESIGN OF JORDAN ROAD IMPROVEMENTS

1. SCOPE OF SERVICES. Consultant shall provide survey, engineering, and related technical services for the Project in accordance with the Scope of Services ("Services") as found in Attachment A, which shall be considered as an integral part hereof.
2. Consultant shall submit as a part of Attachment A an individual Fee Schedule and a Completion Schedule for the Project based on the detailed Scope of Services.
3. In event of a conflict between this Agreement and the attached document(s), this Agreement shall supersede conflicting terms and conditions.
4. Consultant shall be paid on a monthly basis for work performed, based on the Fee Schedule as contained in Attachment A, in the Lump Sum Amount of One Hundred Twenty Thousand and No/100 Dollars (\$120,000.00).

The Board of Mayor and Aldermen Approved this Agreement on the ____ Day of _____ 20____.

TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES

ARTICLE 1. SERVICES. Consultant will:

- 1.1 Act for City in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with standards of competent consultants using the standards in the industry:
- 1.2 Consider all reports to be confidential and distribute copies of the same only to those persons specifically designated by the City.
- 1.3 Perform all services under the general direction of a senior professional employee, licensed and/or registered in the State of Tennessee, when appropriate.
- 1.4 Designate, in writing, the sole Project representative to coordinate with City the Services to be provided, including all contact information.
- 1.5 Unless provided for in the Project Scope of Services (Attachment A), Consultant shall perform all Services with his own forces (employees). Should sub-consultants be proposed to be used in the Project, a listing of said sub-consultants with Services to be performed shall be provided. After approval of this Agreement, no substitute for sub-consultants shall be allowed unless approved by City.
- 1.6 Retain pertinent records relating to the services performed for a period of seven (7) years following the completion of the work; during this period the records shall be available for review by City at all reasonable times.

ARTICLE 2. CITY'S RESPONSIBILITIES. City, or its authorized representative, will:

- 2.1 Provide Consultant with all information regarding the Project, which is available to, or reasonably obtainable by, the City.
- 2.2 Furnish right-of-entry onto the Project site for Consultant's necessary field studies and surveys. Consultant will endeavor to restore the site to its original condition and shall remain solely liable for all damages, costs and expenses, including reasonable attorneys' fees, for failure to make such restoration.
- 2.3 Designate, in writing, the sole Project representative to coordinate with and direct the Consultant, including all contact information.
- 2.4 Guarantee to Consultant that it has the legal capacity to enter into this contract and that sufficient monies are available to fund Consultant's compensation.

ARTICLE 3. GENERAL CONDITIONS.

- 3.1 Consultant, by the performance of services covered hereunder, does not in any way assume, abridge or abrogate any of those duties, responsibilities or authorities customarily vested in other professionals or agencies participating in the Project.
- 3.2 Consultant shall be responsible for the acts or omissions of any party involved in concurrent or subsequent phases of the Project acting upon written instruction issued by the Consultant.
- 3.3 Neither City nor Consultant may assign or transfer its duties or interest in this Agreement without written consent of the other party.
- 3.4 ALLOCATION OF RISK AND LIABILITY; GENERAL. Considering the potential liabilities that may exist during the performance of the services of this Agreement, the relative benefits and risks of the Project, and the Consultant's fee for the services rendered, and in consideration of the promises contained in this Agreement, the City and the Consultant agree to allocate and limit such liabilities in accordance with this Article.

- 3.5 INDEMNIFICATION. Consultant agrees to indemnify and hold City harmless from and against legal liability for all judgments, losses, damages, and expenses to the extent such judgments, losses, damages, or expenses are caused by Consultant's negligent act, error or omission in the performance of the services of this Agreement. In the event judgments, losses, damages, or expenses are caused by the joint or concurrent negligence of Consultant and City, they shall be borne by each party in proportion to its own negligence.
- 3.5.1 SURVIVAL. The terms and conditions of this paragraph shall survive completion of this services agreement.
- 3.6 LIMITATIONS OF RESPONSIBILITY. Consultant shall not be responsible for (a) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project unless specifically undertaken in Attachment A, Scope of Services ; (b) the failure of any contractor, subcontractor, Consultant, or other Project participant, not under contract to Consultant, to fulfill contractual responsibilities to City or to comply with federal, state, or local laws, regulations, and codes; or (c) procuring permits, certificates, and licenses required for any construction unless such procurement responsibilities are specifically assigned to Consultant in Attachment A, Scope of Services.

ARTICLE 4. TERMINATION BY THE CITY. The City may terminate this Agreement in accordance with the following terms and conditions:

- 4.1 Termination for Convenience. The City may, when in the interests of the City, terminate performance under this Agreement with the Consultant, in whole or in part, for the convenience of the City. The City shall give written notice of such termination to the Consultant specifying when termination becomes effective. The Consultant shall incur no further obligations in connection with the work so terminated, other than warranties and guarantees for completed work and installed equipment, and the Consultant shall stop work when such termination becomes effective. The Consultant shall also terminate outstanding orders and subcontracts for the affected work. The Consultant shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The City may direct the Consultant to assign the Consultant's right, title and interest under termination orders or subcontracts to the City or its designee. The Consultant shall transfer title and deliver to the City such completed or partially completed work and materials, equipment, parts, fixtures, information and Contract rights as the Consultant has in its possession or control. When terminated for convenience, the Consultant shall be compensated as follows:
- (1) The Consultant shall submit a termination claim to the City specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the City. If the Consultant fails to file a termination claim within one (1) year from the effective date of termination, the City shall pay the Consultant the amount the City deems the Consultant is due.
 - (2) The City and the Consultant may agree to the compensation, if any, due to the Consultant hereunder.
 - (3) Absent agreement to the amount due to the Consultant, the City shall pay the Consultant the following amounts:
 - (a) Contract costs for labor, materials, equipment and other services accepted under this Agreement;

- (b) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the work, and in terminating the Consultant's performance, plus a fair and reasonable allowance for direct job site overhead and earned profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it reasonably appears that the Consultant would have not profited or would have sustained a loss if the entire Agreement would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

The total sum to be paid the Consultant under this Section shall not exceed the total Agreement Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

- 4.2 Termination for Cause. If the Consultant does not perform the work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment or materials, or if it fails to timely discharge its obligations for labor, equipment and materials, or proceeds to disobey applicable law, or otherwise commits a violation of a material provision of this Agreement, then the City, in addition to any other rights it may have against the Consultant or others, may terminate the performance of the Consultant, in whole or in part at the City's sole option, and assume possession of the Project Plans and materials and may complete the work.

In such case, the Consultant shall not be paid further until the work is complete. After Completion has been achieved, if any portion of the Contract Price, as it may be modified hereunder, remains after the cost to the City of completing the work, including all costs and expenses of every nature incurred, has been deducted by the City, such remainder shall belong to the Consultant. Otherwise, the Consultant shall pay and make whole the City for such cost. This obligation for payment shall survive the termination of the Agreement.

In the event the employment of the Consultant is terminated by the City for cause pursuant to this Section and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under this Section and the provisions of Section 4.1 shall apply.

- 4.3 Termination for Non-Appropriation. The City may also terminate this Agreement, in whole or in part, for non-appropriation of sufficient funds to complete or partially complete the Project, regardless of the source of such funds, and such termination shall be on the terms of Section 4.1.
- 4.4 The City's rights under this Section shall be in addition to those contained elsewhere herein or provided by law.

ARTICLE 5. SCOPE OF SERVICES. Consultant shall provide the Services as described in Attachment A, Scope of Services.

5.1 By mutual agreement, this Agreement and scope can be amended by the parties. The scope and fee for any additional tasks or services under such amendment shall be mutually negotiated and agreed to in writing prior to beginning such additional tasks or services.

5.2 ENVIRONMENTAL RESPONSIBILITY.

Where drilling/sampling services are involved, the samples obtained from the Project site are the property of the City. Should any of these samples be recognized by the Consultant to be contaminated, the City shall remove them from the Consultant's custody and transport them to a disposal site, all in accordance with applicable government statutes, ordinances, and regulations. For all other samples, the Consultant shall retain them for a sixty (60)-day period following the submission of the drilling/sampling report unless the City directs otherwise; thereafter, the Consultant shall discard the samples in accordance with all federal, state and local laws.

ARTICLE 6. SCHEDULE.

6.1 TIME OF THE ESSENCE. The parties agree that time is of the essence with respect to the parties' performance of all provisions of the Agreement.

6.2 Before executing this Agreement, the Consultant shall have prepared and submitted for approval to the City a Completion Schedule for the Project with milestones for the various stages (tasks) of the Services as outlined in the Scope of Services. The Consultant shall submit and obtain the City's approval for any proposed changes to the logic, durations, sequences, or timing of tasks as approved in the Completion Schedule.

6.3 FORCE MAJEURE. Neither party will be liable to the other for any delay or failure to perform any of the services or obligations set forth in this Agreement due to causes beyond its reasonable control, and performance times will be considered extended for a period of time equivalent to the time lost because of such delay plus a reasonable period of time to allow the parties to recommence performance of their respective obligations hereunder. Should a circumstance of force majeure last more than ninety (90) days, either party may by written notice to the other terminate this Agreement. The term "force majeure" as used herein shall mean the following: acts of God; strikes, lockouts or other industrial disturbances; acts of public enemies; orders or restraints of any kind of the government of the United States or of the State or any of their departments, agencies or officials, or any civil or military authority; insurrections, riots, landslides, earthquakes, fires, storms, tornadoes, droughts, floods, explosions, breakage or accident to machinery, transmission pipes or canals; or any other cause or event not reasonably within the control of either party.

6.4 Should City request changes in the scope, extent, or character of the Project, the fee and the time of performance of Consultant's Services as indicated in Attachment A shall be adjusted equitably.

ARTICLE 7. USE OF DOCUMENTS, DATA.

7.1 All Documents, including, but not limited to, reports, drawings, specifications, and computer software prepared by Consultant pursuant to this Agreement are instruments of service in respect to the Project. The City shall retain an ownership and property interest therein whether or not the Project is completed.

- 7.1.1 USE OF DATA SYSTEMS: The City maintains all rights to data systems and data (including derivative or hidden data such as metadata) created and used by Consultant through information supplied to the consultant by the City.
- 7.1.2 DISCLOSURE OF DOCUMENTS/DATA. City may be required to disclose documents or data under state or federal law. City shall notify Consultant if a request for data or documents has been made and shall give Consultant a reasonable opportunity under the circumstances to respond to the request by redacting proprietary or other confidential information. Consultant waives any right to confidentiality of any document, e-mail or file it fails to clearly mark on each page as confidential or proprietary. In exchange, Consultant agrees to indemnify, defend, and hold harmless City for any claims by third parties relating thereto or arising out of (i) the City's failure to disclose such documents or information required to be disclosed by law, or (ii) the City's release of documents as a result of City's reliance upon Consultant representation that materials supplied by Consultant (in full or redacted form) do not contain trade secrets or proprietary information, provided that the City impleads Consultant and Consultant assumes control over that claim.
- 7.2 By execution of this Agreement, Consultant and his sub-consultant(s) grant the City a royalty-free, perpetual, irrevocable, and assignable license to use any and all intellectual property interest Consultant or his sub-consultant(s) possess to any drawings, details, specifications, documents, and other information created before each of their first involvement with the Project and subsequently incorporated into the Project's documents. City-furnished data that may be relied upon by Consultant is limited to the printed copies that are delivered to the Consultant pursuant to Article 2 of this Agreement. Any copyrighted electronic files furnished by City shall be used by Consultant only for the Project as described herein. City's posting or publication of such documents created by Consultant for City shall constitute fair use and shall not constitute an infringement of Consultant's copyright, if any.
- 7.3 Documents that may be relied upon by City are limited to the printed copies (also known as hard copies) that are signed or sealed by the Consultant. Files in electronic media format of text, data, graphics, or of other types that are furnished by Consultant to City are only for convenience of City, unless the delivery of the Project in electronic media format has been dictated in Attachment A, Scope of Services. Any conclusion or information obtained or derived from electronic files provided for convenience will be at the user's sole risk.
- 7.4 Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within sixty (60) days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. Unless stated otherwise herein, Consultant shall not be responsible to maintain documents stored in electronic media format after acceptance by City.
- 7.5 When transferring documents in electronic media format, Consultant makes no representations as to long term compatibility, usability, or readability, of documents resulting from the use of software application packages, operating systems, or computer hardware differing from that as required of, and used by, Consultant at the beginning of this Project.

- 7.6 City may make and retain copies of Documents for information and reference in connection with use on the Project by the City, or his authorized representative. Such Documents are not intended or represented to be suitable for reuse by City or others on extensions of the Project or on any other project. Any such reuse or modifications without written verification or adaptation by Consultant, as appropriate for the specific purpose intended, will be at City's sole risk and without liability or legal exposure to the Consultant or to Consultant's sub-consultants.
- 7.7 If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- 7.8 Any verification or adaptation of the Documents for extensions of the Project or for any other project will entitle Consultant to further compensation at rates to be agreed upon by City and Consultant.

ARTICLE 8. INSURANCE.

- 8.1 During the performance of the Services under this Agreement, Consultant shall maintain the following minimum insurance:
- a) General Liability Insurance with a combined single limit of \$1,000,000 per occurrence and \$2,000,000 annual aggregate.
 - b) Automobile Liability Insurance with a combined single limit of \$1,000,000 for each person and \$1,000,000 for each accident.
 - c) Workers' Compensation Insurance Coverage A in accordance with statutory requirements and Coverage B, Employer's Liability Insurance, with a limit of \$500,000 for each occurrence.
 - d) Professional Liability Insurance with a limit of \$1,000,000 annual aggregate.
- 8.2 Consultant shall add the City an additional insured on all policies unless otherwise prohibited.
- 8.3 Consultant shall, upon execution of this Agreement, furnish City certificates of insurance, which shall include a provision that such insurance shall not be canceled without at least thirty (30) days' written notice to City.
- 8.4 No insurance, of whatever kind or type is to be considered as in any way limiting other parties' responsibility for damages resulting from their activities in the execution of the Project. City agrees to include, or cause to be included, in the Project's construction contract, such requirements for insurance coverage and performance bonds by the Project's construction contractor as City deems adequate to indemnify City, Consultant, and other concerned parties against claims for damages and to insure compliance of work performance and materials with Project requirements.

ARTICLE 9. PAYMENT.

- 9.1 City will pay Consultant for services and expenses in accordance with the Fee Schedule proposal submitted for the Project as part of the Scope of Services. Consultant's invoices will be presented at the completion of the work or monthly and will be payable upon receipt. Payment is due upon presentation of invoice and is past due thirty (30) days from invoice date. City shall give prompt written notice of any disputed amount and shall pay the remaining amount.
- 9.2 Consultant shall be paid in full for all services under this Agreement, including City authorized overruns of the Project budget or unforeseen need for Consultant's services exceeding the original Scope of Services.
- 9.3 TRAVEL; EXPENSES

City shall reimburse reasonable expenses, including travel and meals, when specified in the Scope of Services, but only in accordance with the City's Travel and Expense Policy and Procedures Manual. The maximum amount will be applied as of the date of travel and as listed in the per diem reimbursement rates on the "CONUS" website developed by the United States General Services Administration, located at www.gsa.gov [click on 'per diem rates' under the 'etools' category].

ARTICLE 10. MISCELLANEOUS PROVISIONS

- 10.1 EQUAL EMPLOYMENT OPPORTUNITY. In connection with this Agreement and the Project, City and Consultant shall not discriminate against any employee or applicant for employment because of race, color, sex, national origin, disability or marital status. City and Consultant will take affirmative action to ensure that the contractor used for the Project does not discriminate against any employee and employees are treated during employment without regard to their race, age, religion, color, gender, national origin, disability or marital status. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- 10.1.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.2 TITLE VI – CIVIL RIGHTS ACT OF 1964. City and Consultant shall comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), 49 C.F.R., Part 21, and related statutes and regulations.
- 10.2.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.3 NO THIRD PARTY RIGHTS CREATED. City and Consultant each binds itself and its successors, executors, administrators, permitted assigns, legal representatives and, in the case of a partnership, its partners, to the other party to this Agreement and to their successors, executors, administrators, permitted assigns, legal representatives and partners of such other party in respect to all provisions of this Agreement. The Services provided for in this Agreement are for the sole use and benefit of City and Consultant. Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than City and Consultant.
- 10.4 WARRANTIES/LIMITATION OF LIABILITY/WAIVER. City reserves all rights afforded to local governments under law for all general and implied warranties. City does not waive any rights it may have to all remedies provided by law and therefore any attempt by Consultant to limit its liability shall be void and unenforceable.

ARTICLE 11. EXTENT OF AGREEMENT:

- 11.1 APPLICABLE LAW/CHOICE OF FORUM AND VENUE. This Agreement is made under and will be construed in accordance with the laws of the State of Tennessee without giving effect to that state's choice of law rules. The parties' choice of forum and venue shall be exclusively in the courts of Williamson County, Tennessee. Any provision of this Agreement held to violate a law or regulation shall be deemed void, and all remaining provisions shall continue in force.
- 11.2 ENTIRE AGREEMENT. This Agreement, including these terms and conditions, represent the entire Agreement between City and Consultant for this Project and supersedes all

prior negotiations, representations or agreements, written or oral. This Agreement may be amended only by written instrument signed by City and Consultant.

ARTICLE 12. DISPUTE RESOLUTION, BREACH.

- 12.1 If a dispute should arise relating to the performance of or payment for the Services under this Agreement, the aggrieved party shall notify the other party of the dispute within a reasonable time after such dispute arises. During the pendency of any dispute, the parties shall continue diligently to fulfill their respective obligations hereunder. No arbitration or mediation shall be required as a condition precedent to filing any legal claim arising out of or relating to this Agreement. No arbitration or mediation shall be binding.
- 12.2 BREACH. Upon deliberate breach of the Agreement by either party, the non-breaching party shall be entitled to terminate the Agreement with notice, with all of the remedies it would have in the event of termination, and may also have such other remedies as it may be entitled to in law or in equity.

ARTICLE 13. SURVIVAL.

The provisions contained in this Professional Services Agreement shall survive the completion of or any termination of the Agreement, contract or other document to which it may accompany or incorporate by reference or which subsequently may be modified, unless expressly excepted from this Article upon consent of both parties.

CITY OF FRANKLIN, TENNESSEE:

CDM SMITH:

By: _____
Dr. Ken Moore
Mayor
Date: _____

By: _____
Print: _____
Title: _____
Date: _____

Attest:

Eric S. Stuckey
City Administrator
Date: _____

Approved as to form:

Shauna R. Billingsley, City Attorney



210 25th Avenue N. Suite 1102
Nashville, Tennessee 37203
tel: 615-320-3161

October 14, 2019

Mr. Paul Holzen, Director
Franklin Engineering Department
109 3rd Avenue South
Franklin, TN 37064

Re: Proposal for Jordan Road Reconstruction Design

Dear Mr. Holzen:

We are pleased to respond to your request for professional engineering services for the Jordan Road project. This project will provide for the total reconstruction of the existing Jordan Road from the intersection with Mallory Lane to the intersection with Aspen Grove Road. Work on the project shall include complete design for the roadway improvements including drainage upgrades, modifications to the existing horizontal and vertical alignments, replacement of the bridge over the South Prong of Spencer Creek, intersection improvements at Jordan Road and Aspen Grove Road, and all required signage and pavement markings.

Following is a detailed scope of services for the requested work which is based on our past design work and project understanding and September 30, 2019 scoping meeting. All work shall conform to the current version of the City of Franklin and TDOT roadway standards and specifications.

1. Field Survey

CDM Smith will perform an updated survey of the entire project corridor due to the elapsed timing and potential changes since the original design was completed in August 2009. The following detailed tasks will be provided to ensure it is suitable for the final redesign of the project:

- Establish project control tied to State Plane Grid. We will utilize Trimble R8 GPS receiver for the base project control and utilize Trimble S6 Robotic Total Station surveying equipment for additional traverse control throughout the project.
- We will utilize the GPS and Robotic Total Station to provide detailed field survey of existing pavement, curbs, driveways, sidewalks, and adjacent buildings, and locate existing utility and drainage facilities and features within 100' each side of the centerline of Jordan Road.
- We will obtain cross section data of South Prong of Spencer Creek for the Hydraulic Analysis, 2 sections upstream and downstream of the existing drainage structure.
- Research property ownership and deeds for the estimated 9 tracts to establish existing property lines and right of way. This will also be used for the final right of way acquisition table for the required property acquisition for construction.
- Field survey existing property corners along the project corridor. If sufficient monumentation along the right-of-way cannot be recovered, we will search for additional property corners along the rear property lines.



- Calculate existing property lines and right-of-way lines utilizing the property corners and right-of-way monuments found in the field and develop property maps that identify ownership with bearing and distance labels.
- Utilize available GIS utility information and contact Tennessee One Call to assist with locating underground utilities. The underground utilities will be surveyed based on above ground evidence, Tennessee One Call markings, and GIS information. This proposal does not include subsurface utility investigation or utility line potholing.
- Prepare survey base mapping utilizing Microstation CADD software and Geopak Surveying software. This mapping will include 2D planimetrics and a 3D digital terrain model.

2. **Hydraulic Analysis**

The current effective FIRM and FIS profile show the existing culvert does not contain the 100-year or 500-year storm event. In addition, the effective FIS shows this tributary (South Prong of Spencer Creek) to be a studied stream with a Zone AE classification and an established floodway. The FIS states there was hydraulic and hydrologic analysis performed on the stream section in 1995 and the floodplain boundaries were updated with new topography in 2006. A HEC-RAS model is assumed to be available as stated within the effective FIS section "Countywide Analysis".

The analysis to be provided as part of the scope of work will involve a two-step process. First, our team will complete an analysis for a No-Rise Certification. Jordan Road appears to be a local road within the City of Franklin limits. Therefore, the assumption is the City of Franklin's floodplain manager will be the only approving authority for this task. However, if a No-Rise is not attainable, then a Conditional Letter of Map Revision (CLOMR) application must be developed and submitted to FEMA for approval. A CLOMR application will require a supplement and is not included in this proposal.

The analysis for a "no-rise" certification will follow FEMA and City of Franklin guidelines. The hydraulic design analysis for roadway bridges or culverts will be based on TDOT's Design Procedures for Hydraulic Structures, 2004.

2.1. **Obtain current model from FEMA**

CDM Smith will research and obtain the current effective model (or available data) from FEMA that will serve as the basis for the proposed modeling effort. It is assumed the obtained model will match the effective FIS and FIRM with minimal updates. The vertical datum will be verified from field survey and compared with the obtained hydraulic model. If a significant difference in elevation is observed, a correction factor will be applied to the results.

2.2. **Update Hydraulics of FEMA Effective Model**

Task 1 of this proposal includes the capture of new cross sections via field survey. The FEMA effective model will be updated using the new cross sections. In addition, CDM Smith will perform a comparison of the hydrology of the effective model (i.e. flows from 2006) with current stream flow estimates acceptable by FEMA, such as StreamStats. If a significant difference is found, then CDM Smith will discuss with the City of Franklin to determine if a CLOMR approach should be performed. If such an effort is required, CDM Smith will present an amendment to the City for consideration.

Existing Conditions Models (ECM) will be created to use as a basis for comparison to the proposed roadway improvements. The ECMs will incorporate additional surveyed cross-sections located at and around the project site, as well as any adjustments necessary to Manning's n values to duplicate existing conditions. A Proposed Conditions Model (PCM) will be developed to represent the proposed roadway improvements (including a proposed bridge or culvert) and to determine a "no-rise" to the base flood elevations from the effective FIRM.

2.3. Produce report discussing methods used and changes to the models

Upon completion of tasks 1 and 2, CDM Smith will prepare a report for submittal to the City of Franklin describing the methods used and changes performed to produce hydraulic models representing the existing and proposed conditions for the project. The report will document any changes to the existing conditions to establish a "No-Rise" to the FEMA base flood elevations, floodway elevations and floodway top widths resulting from the proposed roadway improvements. A No-Rise Certification form will be signed and submitted with the final report.

3. Update 2010 Design

Design plans were developed for the City of Franklin in 2010; and with the passage of time, several design standards have changed or been updated. Additionally, the surrounding area has been undergone additional site development after the plans were completed. This scope of this work includes the effort required to bring the design into compliance with current City of Franklin and TDOT standards and complete the 30% Preliminary Roadway Plans, the Final Right-of-Way Plans and the Final Construction Plans, detailed. The details of the work are as follows:

Update Design

The typical section for the extension of Jordan Road will consist of one 12-foot travel lane in each direction, curb and gutter, a 6-foot sidewalk on the north and south sides, a 4' bike lane on the north and south sides, and a turn lane at the intersection with Aspen Grove.

CDM Smith will update the design for Jordan Road to meet the current City of Franklin and TDOT standards and design guidelines. Plans will be at a scale of 1"=50' in English units, and CDM Smith will utilize the current Microstation V8i and Geopak software in preparation of the design plans. Updates to the design plans will consist of the following tasks:

- Review drainage design to be in concurrence with current City of Franklin standards, including catch basin types and minimum depths, and update pipe outlet location.
- Revise slab bridge design using TDOT standard LRFD designs and drawings.
- Update design based on any changes required based on the new survey data.
- Update erosion control design to meet current TDEC standards, including multi-phase design, outfall tables and current erosion control measures. Update acquisition table to include table for Disturbed Areas.
- Revise curb ramps to meet current TDOT and ADA standards.
- Revise proposed sidewalk to the minimum 6-foot width outside of the curb width.
- Update guardrail to meet current TDOT standards and offsets.
- Revise striping at the intersection of Aspen Grove.
- Update pavement schedule to current TDOT items and standard drawings

Update Final Right-of-Way Plans

CDM Smith will update the Final Right-of-Way Plans to current City of Franklin and TDOT standards and Design Guidelines, consisting of the following tasks:

- Incorporate Utility design comments
- Incorporate comments from the City of Franklin
- Update survey for current property information and recent development and revise the acquisition table, utility owners and utility notes, ROW notes, Property Maps, Present Layout Sheets and ROW Detail sheets.
- Update title sheet, plan sheet borders, project labels, and sheet titles as needed.
- Submittal of Plans for Final Right-of-Way.

Final Right-of-Way Plans will consist of the following sheets:

Title Sheet, Index and Legend, Typical Sections and Pavement Schedule, Right-of-Way Notes, Utility Notes and Utility Owners sheet, Property Maps and Right-of-Way Acquisition Tables, Present Layout Sheets, Right-of-Way Detail Sheets, Proposed Layout Sheets, Proposed Profile Sheets, Drainage Maps, Culvert sections, Erosion Prevention & Sediment Control Plans, Roadway Cross-sections.

These changes will be incorporated into the plans, and Final Right-of-Way Plans will be issued along with a preliminary construction cost estimate.

Update Final Construction Plans

CDM Smith will update the Final Construction Plans to current Franklin and TDOT standards and Design Guidelines, consisting of the following tasks:

- Incorporate comments from the City of Franklin
- Update item numbers to meet current TDOT standards
- Update the General Notes
- Update the Index and Standard Drawing sheet
- Revise Tabulated Quantities Tables

Final construction plans will consist of the following sheets:

Title Sheet, Roadway Index and Standard Drawings, Roadway Quantities, Bridge Quantities, Typical Sections and Pavement Schedule, General Notes, Tabulated Quantities, Detail Sheets, Right-of-Way Notes, Utility Notes and Utility Owners sheet, Property Maps and Right-of-Way Acquisition Tables, Present Layout Sheets, Proposed Layout Sheets, Proposed Profile Sheets, Drainage Map, Culvert section, Erosion Prevention & Sediment Control Plans, Traffic Control Plans, Signing and Pavement Marking plan, Sign Schedule Sheet, and Roadway Cross-sections.

4. Permitting

CDM Smith shall prepare, follow-up with, and submit on behalf of the City of Franklin for the following related construction permits required as part of the project. The City of Franklin will be

responsible for obtaining the appropriate checks, or other methods, of payment for all required application fees as necessary. The anticipated permits are as follows based on the previous work:

- Tennessee Department of Environment and Conservation (TDEC) Aquatic Resource Alteration Permit (ARAP) for one stream crossing
- Tennessee Department of Environment and Conservation Notice of Intent (NOI) for Construction Activity and a site-specific Storm Water Pollution Prevention Plan (SWPPP)
- US Army Corps of Engineers Section 404 permit

5. Coordination and Meetings

With any roadway improvement project, there is the anticipation of multiple review meetings to resolve issues that need to be coordinated. This proposal includes time to provide the following coordination and meetings:

- Meetings with City of Franklin staff related to roadway design, utilities coordination and property acquisition. This proposal assumes up to four meetings with the City staff with the following meetings currently being anticipated:
 - Two (2) progress meetings to review the roadway design and other project related issues. These will be coordinated with the City of Franklin staff.
 - A utility coordination meeting with all affected parties along the corridor. The anticipated utilities will be identified by the CDM Smith team and the City of Franklin will coordinate with and invite all utility attendees. CDM Smith will provide impacted utility companies up-to-date plan sets and electronic data to assist with the design of relocations.
 - Final project documents and pre-bid review meeting.

6. Contract Documents and Transmittal

CDM Smith will prepare a complete Final Design package consisting of Plans, Specifications and cost estimate for the work. This will also include all special notes for bidders and other applicable background documents that may be beneficial to the bidders (i.e. geotechnical investigation report, etc.) Upon completion of the contract documents, CDM Smith will transmit to the City of Franklin all project information, including electronic files in PDF format.

The electronic information shall include:

- Survey baseline and data (all applicable files)
- Contract documents (drawings and specifications)
- Quantity information and cost estimate

Assumptions:

- City of Franklin will close the roadway during construction so traffic control will not be necessary. If needed, the City will provide temporary traffic control during the field survey phase when working in travel lanes.
- City of Franklin will provide all known utility data to CDM Smith via GIS data download or applicable as-built documents. In addition, the City will provide approved plans for the planned development on the adjacent site by Boyle. CDM Smith will not be providing any subsurface scanning or potholing to locate utilities.

- The bridge design assumes a “no-rise” finding for the hydraulic analysis
- Existing geotechnical study from previous project shall be used for all geotechnical basis of design. No additional geotechnical investigation or subsurface borings are included in this scope of work.
- Property negotiation and acquisition will be conducted entirely by the City of Franklin.

Items not included in the current Scope of Services:

The following items are not included in the current scope of services for this proposal. Should these tasks be required; a scope and fee will be determined at that time. These items include:

- As this project is being developed without Federal funding, an environmental review and NEPA document is not required.
- Subsurface scanning or potholing of existing utilities.
- Realignment of bridge based on hydraulic analysis.
- Structural Design of retaining walls.
- Utility Relocation Design plans for any utilities besides Mallory Valley Utility District (water) and City of Franklin (sewer).
- Landscaping Design Plans.
- As-built Plans upon completion of the construction. If required, this would be part of a construction services amendment.
- Noise Barrier Study and Design.
- Traffic Signal Design.
- Roadway Lighting Design. All roadway lighting will be installed on the relocated power poles and coordinated with MTEMC directly by City of Franklin.

Schedule

CDM Smith anticipates completing the project according to the following schedule.

- We anticipate commencing with the field survey in December 2019. It will take approximately 8 weeks to complete all required field work and processing of data for base files.
- We anticipate that the hydraulic studies and report will require 3 weeks after receipt of all data.
- We anticipate completing Right-of-Way plans in early 2020. Assuming a reasonable timeframe for property acquisition, we expect the project can be advertised in Spring 2020.

Contractual

CDM Smith proposes to complete the defined plan updates and associated scope of work for the following lump sum fee:

TOTAL	\$120,000.00
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(Including all Field Survey, Hydraulic Analysis for No-Rise Certification, Utility Coordination and Layout and Design Updates required for a complete set of biddable Construction Documents.)

Monthly invoicing will be based on percent completion and shall include a project update. Should you find this proposal acceptable, please include this Exhibit as part of your standard contract for execution.

We truly appreciate the opportunity to present this proposal and trust that it meets your expectations. Please advise if additional information or clarification is needed. We are available as might be needed for in-person discussion as well.

Sincerely,
CDM Smith



Liza Joffrion
Client Service Leader

CITY OF FRANKLIN, TENNESSEE
PROFESSIONAL SERVICES AGREEMENT
COF Contract No. 2019-0321

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and KCI TECHNOLOGIES, INC. hereinafter referenced as Consultant, who mutually agree as follows:

DECLARATIONS. City desires to retain Consultant to provide engineering, related technical, and other services in connection with City's project hereinafter referenced as Project. The Project is described as follows:

COOL SPRINGS AREA TRANSPORTATION NETWORK STUDY

1. SCOPE OF SERVICES. Consultant shall provide data collection, engineering, and related technical services for the Project in accordance with the Scope of Services ("Services") as found in Attachment A, which shall be considered as an integral part hereof.
2. Consultant shall submit as a part of Attachment A an individual Fee Schedule and a Completion Schedule for the Project based on the detailed Scope of Services.
3. In event of a conflict between this Agreement and the attached document(s), this Agreement shall supersede conflicting terms and conditions.
4. Consultant shall be paid on a monthly basis for work performed, based on the Fee Schedule as contained in Attachment A, in the Lump Sum Amount of Two Hundred Ninety Thousand One Hundred and No/100 Dollars (\$290,100.00).

The Board of Mayor and Aldermen Approved this Agreement on the ____ Day of _____ 20____.

TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES

ARTICLE 1. SERVICES. Consultant will:

- 1.1 Act for City in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with standards of competent consultants using the standards in the industry:
- 1.2 Consider all reports to be confidential and distribute copies of the same only to those persons specifically designated by the City.
- 1.3 Perform all services under the general direction of a senior professional employee, licensed and/or registered in the State of Tennessee, when appropriate.
- 1.4 Designate, in writing, the sole Project representative to coordinate with City the Services to be provided, including all contact information.
- 1.5 Unless provided for in the Project Scope of Services (Attachment A), Consultant shall perform all Services with his own forces (employees). Should sub-consultants be proposed to be used in the Project, a listing of said sub-consultants with Services to be performed shall be provided. After approval of this Agreement, no substitute for sub-consultants shall be allowed unless approved by City.
- 1.6 Retain pertinent records relating to the services performed for a period of seven (7) years following the completion of the work; during this period the records shall be available for review by City at all reasonable times.

ARTICLE 2. CITY'S RESPONSIBILITIES. City, or its authorized representative, will:

- 2.1 Provide Consultant with all information regarding the Project, which is available to, or reasonably obtainable by, the City.
- 2.2 Furnish right-of-entry onto the Project site for Consultant's necessary field studies and surveys. Consultant will endeavor to restore the site to its original condition and shall remain solely liable for all damages, costs and expenses, including reasonable attorneys' fees, for failure to make such restoration.
- 2.3 Designate, in writing, the sole Project representative to coordinate with and direct the Consultant, including all contact information.
- 2.4 Guarantee to Consultant that it has the legal capacity to enter into this contract and that sufficient monies are available to fund Consultant's compensation.

ARTICLE 3. GENERAL CONDITIONS.

- 3.1 Consultant, by the performance of services covered hereunder, does not in any way assume, abridge or abrogate any of those duties, responsibilities or authorities customarily vested in other professionals or agencies participating in the Project.
- 3.2 Consultant shall be responsible for the acts or omissions of any party involved in concurrent or subsequent phases of the Project acting upon written instruction issued by the Consultant.
- 3.3 Neither City nor Consultant may assign or transfer its duties or interest in this Agreement without written consent of the other party.
- 3.4 ALLOCATION OF RISK AND LIABILITY; GENERAL. Considering the potential liabilities that may exist during the performance of the services of this Agreement, the relative benefits and risks of the Project, and the Consultant's fee for the services rendered, and in consideration of the promises contained in this Agreement, the City and the Consultant agree to allocate and limit such liabilities in accordance with this Article.

- 3.5 INDEMNIFICATION. Consultant agrees to indemnify and hold City harmless from and against legal liability for all judgments, losses, damages, and expenses to the extent such judgments, losses, damages, or expenses are caused by Consultant's negligent act, error or omission in the performance of the services of this Agreement. In the event judgments, losses, damages, or expenses are caused by the joint or concurrent negligence of Consultant and City, they shall be borne by each party in proportion to its own negligence.
- 3.5.1 SURVIVAL. The terms and conditions of this paragraph shall survive completion of this services agreement.
- 3.6 LIMITATIONS OF RESPONSIBILITY. Consultant shall not be responsible for (a) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project unless specifically undertaken in Attachment A, Scope of Services ; (b) the failure of any contractor, subcontractor, Consultant, or other Project participant, not under contract to Consultant, to fulfill contractual responsibilities to City or to comply with federal, state, or local laws, regulations, and codes; or (c) procuring permits, certificates, and licenses required for any construction unless such procurement responsibilities are specifically assigned to Consultant in Attachment A, Scope of Services.

ARTICLE 4. TERMINATION BY THE CITY. The City may terminate this Agreement in accordance with the following terms and conditions:

- 4.1 Termination for Convenience. The City may, when in the interests of the City, terminate performance under this Agreement with the Consultant, in whole or in part, for the convenience of the City. The City shall give written notice of such termination to the Consultant specifying when termination becomes effective. The Consultant shall incur no further obligations in connection with the work so terminated, other than warranties and guarantees for completed work and installed equipment, and the Consultant shall stop work when such termination becomes effective. The Consultant shall also terminate outstanding orders and subcontracts for the affected work. The Consultant shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The City may direct the Consultant to assign the Consultant's right, title and interest under termination orders or subcontracts to the City or its designee. The Consultant shall transfer title and deliver to the City such completed or partially completed work and materials, equipment, parts, fixtures, information and Contract rights as the Consultant has in its possession or control. When terminated for convenience, the Consultant shall be compensated as follows:
- (1) The Consultant shall submit a termination claim to the City specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the City. If the Consultant fails to file a termination claim within one (1) year from the effective date of termination, the City shall pay the Consultant the amount the City deems the Consultant is due.
 - (2) The City and the Consultant may agree to the compensation, if any, due to the Consultant hereunder.
 - (3) Absent agreement to the amount due to the Consultant, the City shall pay the Consultant the following amounts:
 - (a) Contract costs for labor, materials, equipment and other services accepted under this Agreement;

- (b) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the work, and in terminating the Consultant's performance, plus a fair and reasonable allowance for direct job site overhead and earned profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it reasonably appears that the Consultant would have not profited or would have sustained a loss if the entire Agreement would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

The total sum to be paid the Consultant under this Section shall not exceed the total Agreement Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

- 4.2 Termination for Cause. If the Consultant does not perform the work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment or materials, or if it fails to timely discharge its obligations for labor, equipment and materials, or proceeds to disobey applicable law, or otherwise commits a violation of a material provision of this Agreement, then the City, in addition to any other rights it may have against the Consultant or others, may terminate the performance of the Consultant, in whole or in part at the City's sole option, and assume possession of the Project Plans and materials and may complete the work.

In such case, the Consultant shall not be paid further until the work is complete. After Completion has been achieved, if any portion of the Contract Price, as it may be modified hereunder, remains after the cost to the City of completing the work, including all costs and expenses of every nature incurred, has been deducted by the City, such remainder shall belong to the Consultant. Otherwise, the Consultant shall pay and make whole the City for such cost. This obligation for payment shall survive the termination of the Agreement.

In the event the employment of the Consultant is terminated by the City for cause pursuant to this Section and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under this Section and the provisions of Section 4.1 shall apply.

- 4.3 Termination for Non-Appropriation. The City may also terminate this Agreement, in whole or in part, for non-appropriation of sufficient funds to complete or partially complete the Project, regardless of the source of such funds, and such termination shall be on the terms of Section 4.1.
- 4.4 The City's rights under this Section shall be in addition to those contained elsewhere herein or provided by law.

ARTICLE 5. SCOPE OF SERVICES. Consultant shall provide the Services as described in Attachment A, Scope of Services.

5.1 By mutual agreement, this Agreement and scope can be amended by the parties. The scope and fee for any additional tasks or services under such amendment shall be mutually negotiated and agreed to in writing prior to beginning such additional tasks or services.

5.2 ENVIRONMENTAL RESPONSIBILITY.

Where drilling/sampling services are involved, the samples obtained from the Project site are the property of the City. Should any of these samples be recognized by the Consultant to be contaminated, the City shall remove them from the Consultant's custody and transport them to a disposal site, all in accordance with applicable government statutes, ordinances, and regulations. For all other samples, the Consultant shall retain them for a sixty (60)-day period following the submission of the drilling/sampling report unless the City directs otherwise; thereafter, the Consultant shall discard the samples in accordance with all federal, state and local laws.

ARTICLE 6. SCHEDULE.

6.1 TIME OF THE ESSENCE. The parties agree that time is of the essence with respect to the parties' performance of all provisions of the Agreement.

6.2 Before executing this Agreement, the Consultant shall have prepared and submitted for approval to the City a Completion Schedule for the Project with milestones for the various stages (tasks) of the Services as outlined in the Scope of Services. The Consultant shall submit and obtain the City's approval for any proposed changes to the logic, durations, sequences, or timing of tasks as approved in the Completion Schedule.

6.3 FORCE MAJEURE. Neither party will be liable to the other for any delay or failure to perform any of the services or obligations set forth in this Agreement due to causes beyond its reasonable control, and performance times will be considered extended for a period of time equivalent to the time lost because of such delay plus a reasonable period of time to allow the parties to recommence performance of their respective obligations hereunder. Should a circumstance of force majeure last more than ninety (90) days, either party may by written notice to the other terminate this Agreement. The term "force majeure" as used herein shall mean the following: acts of God; strikes, lockouts or other industrial disturbances; acts of public enemies; orders or restraints of any kind of the government of the United States or of the State or any of their departments, agencies or officials, or any civil or military authority; insurrections, riots, landslides, earthquakes, fires, storms, tornadoes, droughts, floods, explosions, breakage or accident to machinery, transmission pipes or canals; or any other cause or event not reasonably within the control of either party.

6.4 Should City request changes in the scope, extent, or character of the Project, the fee and the time of performance of Consultant's Services as indicated in Attachment A shall be adjusted equitably.

ARTICLE 7. USE OF DOCUMENTS, DATA.

7.1 All Documents, including, but not limited to, reports, drawings, specifications, and computer software prepared by Consultant pursuant to this Agreement are instruments of service in respect to the Project. The City shall retain an ownership and property interest therein whether or not the Project is completed.

- 7.1.1 USE OF DATA SYSTEMS: The City maintains all rights to data systems and data (including derivative or hidden data such as metadata) created and used by Consultant through information supplied to the consultant by the City.
- 7.1.2 DISCLOSURE OF DOCUMENTS/DATA. City may be required to disclose documents or data under state or federal law. City shall notify Consultant if a request for data or documents has been made and shall give Consultant a reasonable opportunity under the circumstances to respond to the request by redacting proprietary or other confidential information. Consultant waives any right to confidentiality of any document, e-mail or file it fails to clearly mark on each page as confidential or proprietary. In exchange, Consultant agrees to indemnify, defend, and hold harmless City for any claims by third parties relating thereto or arising out of (i) the City's failure to disclose such documents or information required to be disclosed by law, or (ii) the City's release of documents as a result of City's reliance upon Consultant representation that materials supplied by Consultant (in full or redacted form) do not contain trade secrets or proprietary information, provided that the City impleads Consultant and Consultant assumes control over that claim.
- 7.2 By execution of this Agreement, Consultant and his sub-consultant(s) grant the City a royalty-free, perpetual, irrevocable, and assignable license to use any and all intellectual property interest Consultant or his sub-consultant(s) possess to any drawings, details, specifications, documents, and other information created before each of their first involvement with the Project and subsequently incorporated into the Project's documents. City-furnished data that may be relied upon by Consultant is limited to the printed copies that are delivered to the Consultant pursuant to Article 2 of this Agreement. Any copyrighted electronic files furnished by City shall be used by Consultant only for the Project as described herein. City's posting or publication of such documents created by Consultant for City shall constitute fair use and shall not constitute an infringement of Consultant's copyright, if any.
- 7.3 Documents that may be relied upon by City are limited to the printed copies (also known as hard copies) that are signed or sealed by the Consultant. Files in electronic media format of text, data, graphics, or of other types that are furnished by Consultant to City are only for convenience of City, unless the delivery of the Project in electronic media format has been dictated in Attachment A, Scope of Services. Any conclusion or information obtained or derived from electronic files provided for convenience will be at the user's sole risk.
- 7.4 Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within sixty (60) days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. Unless stated otherwise herein, Consultant shall not be responsible to maintain documents stored in electronic media format after acceptance by City.
- 7.5 When transferring documents in electronic media format, Consultant makes no representations as to long term compatibility, usability, or readability, of documents resulting from the use of software application packages, operating systems, or computer hardware differing from that as required of, and used by, Consultant at the beginning of this Project.

- 7.6 City may make and retain copies of Documents for information and reference in connection with use on the Project by the City, or his authorized representative. Such Documents are not intended or represented to be suitable for reuse by City or others on extensions of the Project or on any other project. Any such reuse or modifications without written verification or adaptation by Consultant, as appropriate for the specific purpose intended, will be at City's sole risk and without liability or legal exposure to the Consultant or to Consultant's sub-consultants.
- 7.7 If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- 7.8 Any verification or adaptation of the Documents for extensions of the Project or for any other project will entitle Consultant to further compensation at rates to be agreed upon by City and Consultant.

ARTICLE 8. INSURANCE.

- 8.1 During the performance of the Services under this Agreement, Consultant shall maintain the following minimum insurance:
- a) General Liability Insurance with a combined single limit of \$1,000,000 per occurrence and \$2,000,000 annual aggregate.
 - b) Automobile Liability Insurance with a combined single limit of \$1,000,000 for each person and \$1,000,000 for each accident.
 - c) Workers' Compensation Insurance Coverage A in accordance with statutory requirements and Coverage B, Employer's Liability Insurance, with a limit of \$500,000 for each occurrence.
 - d) Professional Liability Insurance with a limit of \$1,000,000 annual aggregate.
- 8.2 Consultant shall add the City an additional insured on all policies unless otherwise prohibited.
- 8.3 Consultant shall, upon execution of this Agreement, furnish City certificates of insurance, which shall include a provision that such insurance shall not be canceled without at least thirty (30) days' written notice to City.
- 8.4 No insurance, of whatever kind or type is to be considered as in any way limiting other parties' responsibility for damages resulting from their activities in the execution of the Project. City agrees to include, or cause to be included, in the Project's construction contract, such requirements for insurance coverage and performance bonds by the Project's construction contractor as City deems adequate to indemnify City, Consultant, and other concerned parties against claims for damages and to insure compliance of work performance and materials with Project requirements.

ARTICLE 9. PAYMENT.

- 9.1 City will pay Consultant for services and expenses in accordance with the Fee Schedule proposal submitted for the Project as part of the Scope of Services. Consultant's invoices will be presented at the completion of the work or monthly and will be payable upon receipt. Payment is due upon presentation of invoice and is past due thirty (30) days from invoice date. City shall give prompt written notice of any disputed amount and shall pay the remaining amount.
- 9.2 Consultant shall be paid in full for all services under this Agreement, including City authorized overruns of the Project budget or unforeseen need for Consultant's services exceeding the original Scope of Services.
- 9.3 TRAVEL; EXPENSES

City shall reimburse reasonable expenses, including travel and meals, when specified in the Scope of Services, but only in accordance with the City's Travel and Expense Policy and Procedures Manual. The maximum amount will be applied as of the date of travel and as listed in the per diem reimbursement rates on the "CONUS" website developed by the United States General Services Administration, located at www.gsa.gov [click on 'per diem rates' under the 'etools' category].

ARTICLE 10. MISCELLANEOUS PROVISIONS

- 10.1 EQUAL EMPLOYMENT OPPORTUNITY. In connection with this Agreement and the Project, City and Consultant shall not discriminate against any employee or applicant for employment because of race, color, sex, national origin, disability or marital status. City and Consultant will take affirmative action to ensure that the contractor used for the Project does not discriminate against any employee and employees are treated during employment without regard to their race, age, religion, color, gender, national origin, disability or marital status. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- 10.1.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.2 TITLE VI – CIVIL RIGHTS ACT OF 1964. City and Consultant shall comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), 49 C.F.R., Part 21, and related statutes and regulations.
- 10.2.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.3 NO THIRD PARTY RIGHTS CREATED. City and Consultant each binds itself and its successors, executors, administrators, permitted assigns, legal representatives and, in the case of a partnership, its partners, to the other party to this Agreement and to their successors, executors, administrators, permitted assigns, legal representatives and partners of such other party in respect to all provisions of this Agreement. The Services provided for in this Agreement are for the sole use and benefit of City and Consultant. Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than City and Consultant.
- 10.4 WARRANTIES/LIMITATION OF LIABILITY/WAIVER. City reserves all rights afforded to local governments under law for all general and implied warranties. City does not waive any rights it may have to all remedies provided by law and therefore any attempt by Consultant to limit its liability shall be void and unenforceable.

ARTICLE 11. EXTENT OF AGREEMENT:

- 11.1 APPLICABLE LAW/CHOICE OF FORUM AND VENUE. This Agreement is made under and will be construed in accordance with the laws of the State of Tennessee without giving effect to that state's choice of law rules. The parties' choice of forum and venue shall be exclusively in the courts of Williamson County, Tennessee. Any provision of this Agreement held to violate a law or regulation shall be deemed void, and all remaining provisions shall continue in force.
- 11.2 ENTIRE AGREEMENT. This Agreement, including these terms and conditions, represent the entire Agreement between City and Consultant for this Project and supersedes all

prior negotiations, representations or agreements, written or oral. This Agreement may be amended only by written instrument signed by City and Consultant.

ARTICLE 12. DISPUTE RESOLUTION, BREACH.

- 12.1 If a dispute should arise relating to the performance of or payment for the Services under this Agreement, the aggrieved party shall notify the other party of the dispute within a reasonable time after such dispute arises. During the pendency of any dispute, the parties shall continue diligently to fulfill their respective obligations hereunder. No arbitration or mediation shall be required as a condition precedent to filing any legal claim arising out of or relating to this Agreement. No arbitration or mediation shall be binding.
- 12.2 BREACH. Upon deliberate breach of the Agreement by either party, the non-breaching party shall be entitled to terminate the Agreement with notice, with all of the remedies it would have in the event of termination, and may also have such other remedies as it may be entitled to in law or in equity.

ARTICLE 13. SURVIVAL.

The provisions contained in this Professional Services Agreement shall survive the completion of or any termination of the Agreement, contract or other document to which it may accompany or incorporate by reference or which subsequently may be modified, unless expressly excepted from this Article upon consent of both parties.

CITY OF FRANKLIN, TENNESSEE:

KCI TECHNOLOGIES, INC.:

By: _____
Dr. Ken Moore
Mayor
Date: _____

By: _____
Print: _____
Title: _____
Date: _____

Attest:

Eric S. Stuckey
City Administrator
Date: _____

Approved as to form:

Shauna R. Billingsley, City Attorney



ISO 9001:2015 CERTIFIED

ENGINEERS • PLANNERS • SCIENTISTS • CONSTRUCTION MANAGERS

500 11th Avenue North, Suite 290 • Nashville, TN 37203 • Phone 615.370.8410 • Fax 615.370.8455

September 23, 2019

Mr. Adam Moser, P.E.
Office of the City Engineer
109 3rd Avenue South
Suite 133
Franklin, Tennessee 37064

Client's Authorized Representative(s): Adam Moser, P.E.

Subject: Proposed Scope of Work & Fee Estimate – The City of Franklin’s Cool Springs Area Transportation Network Study

KCI Technologies, Inc. (KCI) is pleased to submit this proposed scope and fee estimate (the "Proposal") to City of Franklin ("Client") for the work (the "Work") described in detail in the Scope of Services section of this Proposal. The Work will be performed for the following:

Location: Franklin, Tennessee

Project: Cool Springs Area Transportation Network Study

SCOPE OF SERVICES:

KCI’s understanding is that the purpose of the work to be performed is to examine existing and future transportation needs in the Cool Springs area. The study will identify and prioritize needs to improve safety and mobility for all users on major transportation corridors within this area. The study is to include all existing and potential corridors in the area, generally from Moores Lane to Murfreesboro Road.

This Proposal is limited exclusively to the Work as described in this Scope of Services section and anything not expressly described shall be considered excluded from the Work. KCI proposes to perform the Work which is described as follows:

Task 1 – Information Gathering and Existing Conditions

The purpose of this task is to establish a firm foundation, rooted in data, from which the modeling and analysis process will take place. All data points and analyses of existing conditions for the corridors within the Cool Springs area will consider and incorporate travel within, to, and from the area. Our approach to this task includes:

- **1A. Review Available Data**

Relevant previous models, plans, programs, and other data provided by the City of Franklin and TDOT will be reviewed including, but not limited to, turning movement counts, traffic impact studies, ADT data, crash records, GIS data, land use plans, transportation plans, design plans and other planning studies, subdivision regulations and zoning ordinances, and all planned roadway improvement programs. The purpose of these evaluations will be to identify the status of previously-recommended projects, coordinate previously completed efforts, and build upon the recommendations presented in existing plans. The information reviewed will be used to identify and evaluate existing conditions and develop the recommended improvements program.

- **1B. Roadway & Traffic Data Collection**

Roadway and traffic conditions will be inventoried in order to understand the current transportation system and its related system performance. Points of data include, but are not limited to, existing rights-of-way, roadway cross-sections and laneage, transit routes and stops, speed limits, traffic volumes, presence of on-street parking, presence of sidewalk and bikeway facilities, and traffic signal timings. KCI will observe existing queueing and note existing operational and safety issues at the inventoried intersections.

During the field inventory process KCI field staff will visit new or recently opened developments in order to gather data regarding the percent occupancy in these developments. This process will allow future trips to be added for existing developments that are not yet fully occupied.

The study area will include the following intersections:

1. Bakers Bridge Avenue and Market Exchange Ct
2. Carothers Parkway and Bakers Bridge Avenue
3. Carothers Parkway and Corporate Centre Drive
4. Carothers Parkway and Crescent Centre Drive N (unsignalized)
5. Carothers Parkway and Crescent Centre Drive S
6. Carothers Parkway and Gillespie Drive/Meridian Boulevard
7. Carothers Parkway and Liberty Pike
8. Carothers Parkway and Mayfield Way
9. Carothers Parkway and Nissan Way (Primary)
10. Carothers Parkway and Nissan Way N (unsignalized)
11. Carothers Parkway and Nissan Way S (unsignalized)
12. Carothers Parkway and Ovation Parkway
13. Carothers Parkway and Physicians Way
14. Carothers Parkway and Private Road north of Mayfield Drive (unsignalized)
15. Carothers Parkway and Private Road south of Mayfield Drive (unsignalized)
16. Carothers Parkway and Resource Parkway (unsignalized)
17. Carothers Parkway and Southstar Drive
18. Carothers Parkway and Tower Circle
19. Cool Springs Boulevard and Aspen Grove Drive
20. Cool Springs Boulevard and Carothers Parkway
21. Cool Springs Boulevard and E McEwen Drive
22. Cool Springs Boulevard and Frazier Drive
23. Cool Springs Boulevard and Highwoods
24. Cool Springs Boulevard and I-65 Northbound Ramps

25. Cool Springs Boulevard and I-65 Southbound Ramps
26. Cool Springs Boulevard and W McEwen Drive
27. Cool Springs Boulevard and Windcross Court
28. Galleria Boulevard and Bakers Bridge Avenue
29. Galleria Boulevard and Cool Springs Crossings
30. Galleria Boulevard and I-65 Southbound
31. Liberty Pike and Mallory Lane/N Royal Oaks Boulevard
32. Mallory Lane and Bakers Bridge Avenue
33. Mallory Lane and Cool Springs Boulevard
34. Mallory Lane and Crossroads Boulevard
35. Mallory Lane and Frazier Drive
36. Mallory Lane and Jordan Road
37. Mallory Lane and Kroger Center
38. Mallory Lane and Mallory Station Road /South Springs
39. Mallory Lane and Nichol Mill Lane
40. Mallory Lane and Seaboard Lane
41. Mallory Lane and Spring Creek Drive
42. Mallory Station Road and Duke Drive (shared controlled w Gen George Patton Drive)
43. Mallory Station Road and Gen George Patton Drive
44. Mallory Station Road and Seaboard Lane
45. McEwen Drive and Carothers Parkway
46. McEwen Drive and I-65 Interchange
47. McEwen Drive and Mallory Lane
48. McEwen Drive and Ovation Parkway
49. McEwen Drive and Spring Creek Drive
50. McEwen Drive and Tower Circle
51. McEwen Drive and Turning Wheel Lane (unsignalized)
52. *Moore's Lane and Carothers Parkway (City of Brentwood)*
53. *Moore's Lane and Galleria Boulevard (City of Brentwood)*
54. *Moore's Lane and I-65 Northbound (City of Brentwood)*
55. *Moore's Lane and I-65 Southbound (City of Brentwood)*
56. *Moore's Lane and Mallory Lane (City of Brentwood)*
57. *Moore's Lane and Westgate Circle (City of Brentwood)*
58. Murfreesboro Road (SR 96) and Carothers Parkway
59. Murfreesboro Road (SR 96) and Edward Curd Lane
60. Murfreesboro Road (SR 96) and I-65 Northbound Ramp
61. Murfreesboro Road (SR 96) and I-65 Southbound Ramp
62. Murfreesboro Road (SR 96) and Royal Oaks Boulevard
63. Royal Oaks Boulevard and Lakeview Drive

KCI will collect turning movement counts at up to 50 study intersections as determined by the City and identified above. Turning movement counts will be collected for AM (7:00-9:00AM), Midday (11:00AM-1:00PM), and PM (4:00-6:00PM) peak periods. Pedestrians and bicycles will be included in the traffic counts. The results of these counts will be used to conduct traffic analyses of each intersection as well as to provide data to better understand travel patterns through the study area.

- **1C. Drone Footage**

KCI will collect drone footage of the study area in order to observe high level traffic flows, extended queues, and lane utilization. This effort will provide input into the Vistro model calibration and may also be useful for presentations to project stakeholders. Drone footage will be collected on two days and will include one hour of footage for three peaks (AM, Midday, and PM) during each day. The drone footage will attempt to capture each study area, focusing first on the more central, and higher volume study intersections. A total of six hours of drone footage will be captured and provided.

- **1D. Existing Conditions Analysis and Modeling**

KCI will evaluate the existing conditions at the 63 study intersections, 57 within the City of Franklin and 6 within the City of Brentwood and will conduct capacity analyses using Vistro based on the roadway inventory data and traffic count data. Vistro produces the capacity analysis outputs required for this project (level of service, delay, queues, v/c ratio, etc.), but has added functionality in the areas of traffic impact analysis. Specifically, Vistro allows for the creation of multiple development scenarios within a single file, each of which can contain multiple site-specific developments and their respective access points on the network, trip generations, distributions, and assignments.

Existing scenario Vistro models will be created for the AM, Midday, and PM peak hours and will be initially based on conversion of the City's existing Synchro traffic model into Vistro. Once converted and modified to add the additional intersections within the study area, KCI will check all inputs to the model to verify its accuracy (laneage, signal timings, etc.). Models will then be calibrated and validated to duplicate the bottlenecks and queues within the study area. Calibration may include updating specific aspects of the Vistro model, including the following design parameters:

- Saturation flow rate
- Lane utilization
- Lane widths
- Signal operations

- **1E. Existing Policy Review**

To understand the existing development climate as well as the potential for future growth within the Cool Springs study area, KCI will review the City's land use plans, growth policies, and transportation plans. This will include, but is not limited to:

- Envision Franklin
- Franklin Zoning Ordinance
- Franklin Traffic Impact Study Guidelines
- Transportation and Street Standards
- Connect Franklin
- Integrated Growth Plan
- Greenways and Open Space Master Plan
- Cool Springs Multimodal Transportation Study

Review of Envision Franklin and the newly drafted zoning ordinance will first allow KCI to determine allowable densities within the study area, which will help calculate the growth potential for both vacant land as well as those parcels poised for redevelopment. Ultimately, this

review will feed the creation of a full-build out scenario, laying the foundation for an analysis of future traffic conditions. Once future conditions are established, a review of the Connect Franklin document, the Integrated Growth Plan, the Greenways and Open Space Master Plan, and the Cool Springs Multimodal Transportation Study will be used to produce a comprehensive list of previously-identified multimodal improvements in the study area. This list will be supplemented and modified based on results of the future conditions analysis as well as input from the City.

An important component of this task will be the review of Franklin's Traffic Impact Study Guidelines and Transportation Street Standards. While not directly impacting the technical analyses included in this project, this review will seek to objectively evaluate whether the existing processes are adequate in enabling the City to accomplish infrastructure investments that are necessitated by growth. Within this review and discussion will be ideas related to performance metrics for measuring congestion (v/c ratios, level-of-service, travel time, Vehicle Miles Traveled (VMT), etc.), what constitutes acceptable traffic operations, and the types of improvements required with development including non-motorized modes, transit, and other transportation technology solutions. The research and discussion surrounding this element will be focused in areas with similar character to and built environments as Franklin.

- **1F. Existing Conditions Summary**

KCI will summarize the data collected and analyzed for Task 1 in an Existing Conditions Memorandum. The memo will summarize sub-tasks 1A through 1D and will identify any recommendations for immediate needs regarding safety or operations.

Task 1 Deliverables:

- **Existing Conditions Summary**
 - **Roadway and Traffic Data**
 - **Capacity Analysis**
 - **Operational Issues and Improvements**
 - **Noted Safety Issues**
 - **Policy Review**

Task 2 – Project Growth and Future Conditions

- **2A. Background Growth**

Utilizing historic TMC and AADT data, KCI will establish a background growth rate for each study corridor. Major corridors may be broken into multiple segments based on roadway context and connectivity. KCI will populate a figure or table with proposed annual growth rates by corridor for City of Franklin approval.

- **2B. Future Scenarios: Approved Developments**

Using information provided by the City of Franklin, KCI will assemble information for all planned and approved developments in the study area. For developments with traffic impact studies, distributions will be extended through the study area by the creation of paths in the Vistro model. It is anticipated that this task will involve not more than 25 developments.

Further, KCI will work with the City to identify committed roadway improvements as included in the City's Capital Improvement Plan (CIP).

Committed roadway improvements will be incorporated into future Vistro model scenarios. Two approved development future model scenarios are proposed:

1. Future 50%: 10 Year Growth, including approved roadway improvements and 50% of all approved developments,
2. Future 100%: 10 Year Growth, including approved roadway improvements and 100% of all approved developments.

Both scenarios will assess AM, Midday, and PM peak operations. Both scenarios will be analyzed first with the current, committed roadway improvements and second, with additional improvements needed to achieve an acceptable level of service, delay, and queuing. Outputs presented will include level-of-service, delay, v/c ratio, and 95th percentile queues. In addition, a component of this task will be exploring additional performance metrics that may be useful in conveying the difference in existing and future congestion levels to the public and stakeholders. Results from this task will be presented in tabular format and/or via intersection diagrams and will be also included in the future conditions summary.

The results of this effort will be a preliminary list of project recommendations and their associated impact on performance.

- **2C. Future Scenarios: Maximized Development Potential**

KCI will work with the City to determine development potential for undeveloped or underdeveloped parcels of land within the study area. Development potential will be determined using the City's Draft Zoning Ordinance. Once identified, these will be included in the future condition models at the City's discretion.

Building on future scenarios 1 and 2, KCI will incorporate maximized development potential into the future Vistro model scenarios. Two maximized development future model scenarios are proposed:

3. Future 50%: 10 Year Growth, including approved roadway improvements and 50% of all approved and potential developments,
4. Future 100%: 10 Year Growth, including approved roadway improvements and 100% of all approved and potential developments.

Both scenarios will assess AM, Midday, and PM peak operations. Both scenarios will be analyzed first with the current, committed roadway improvements and second, with additional improvements needed to achieve an acceptable level of service, delay, and queuing. Outputs presented will include level-of-service, delay, v/c ratio, and 95th percentile queues. Results from this task will be presented in tabular format and/or via intersection diagrams and will be also included in the future conditions summary.

The results of this effort will be a preliminary list of project recommendations and their associated impact on performance.

Task 2 Deliverables:

- **Future Conditions Summary**
 - o Capacity analysis results for each scenario
 - o Preliminary list of project recommendations

Task 3 –Project Recommendations and Preliminary Opinion of Probable Cost

Utilizing the analysis completed in Tasks 1 and 2 and the preliminary list of recommendations determined via Vistro modeling, KCI will develop a list of phased and actionable recommendations. Recommendations will include a prioritized list of projects for the study area. The recommendations will further comprise innovative solutions identified during the project development process, including changes to policy and planning strategies that support the vision for the study area, as called for in Envision Franklin. Such recommendations may include sidewalk, bikeway, transit, traffic demand management strategies, access management strategies, transportation technology solutions, etc. Each transportation improvement will be coupled with an associated planning-level opinion of probable cost and will be phased and identified as either short- or long-term, based on the expected timeframe for implementation, relationship to expected development timelines, model outputs, and overall feasibility.

A draft report will be prepared and submitted to the client for review. The report will address in detail the inventory and data collected, project assumptions, analyses conducted, the output of said analysis, and recommendations and conclusions. The report will include the graphics, maps, and data to support and adequately illustrate the recommendations of this study. KCI anticipates the project documentation process to be coupled with an engaging review process, with input from the City and identified stakeholders. Up to two rounds of review and revision are included for the final report.

Task 3 Deliverables:

- **Prioritized List of Recommended Projects, Policies, and Strategies**
 - **Opinion of Probable Cost**
 - **Implementation Timeline**
- **Draft and Final Report**

Task 4 – Functional Plans

Each infrastructure project identified in the prioritized list of recommended projects will be translated into functional plans. It is anticipated that functional plans will be designed on top of aerial imagery. Imagery is to be provided by the city. Necessary field visits will be made to explore existing roadway conditions, existing utilities and a general review of existing grades and cross slopes. This information will be used in the functional design. The functional plans will include distinguishable color coding to identify existing vs. proposed infrastructure. Anticipated proposed infrastructure will include turn lanes with appropriate bay length and taper length, lane widening, bike lanes, concept level roundabouts and mini roundabouts. It is not anticipated that functional plans will include storm sewer work, cross-sections, or proposed roadway grades. Up to one round of review and revision are included for the functional plans.

Task 5 – Vistro Model Software Support and Materials

KCI will develop and administer support to City of Franklin staff for PTV America's Vistro software. This will focus on the required data inputs and features of the Vistro software. City staff will learn how to complete a simple analysis from start to finish, including understanding the results provided by the Vistro software.

Support activities will consist of a one-day (or two half-day) session with up to six attendees from the City of Franklin. KCI will provide all required materials. The session will showcase examples of how the City may utilize the existing model scenarios in the future; including the addition of intersections,

the addition of developments, and, editing paths. Participants are anticipated to leave with a wide-ranging understanding of the Vistro software and will have a binder of pertinent resource materials to reference after completion.

Task 6 – Project Management and Coordination

At the beginning of the project KCI will prepare for and attend a kick-off meeting with representatives responsible for the oversight of this project. The purpose of this initial meeting will be to discuss and review the proposed scope of services and study schedule, define study area intersections, and acquire existing data relevant to the study.

Beyond the kick-off meeting, project management meetings will be held monthly between the City of Franklin and KCI. The project timeframe is 12 months; therefore 12 project management meetings are anticipated.

KCI further anticipates the need to present project findings to the Board of Mayor and Alderman (BOMA) during multiple stages of the project. A total of four BOMA presentations are included at the anticipated project stages:

- During Task 1: KCI will present the first stage of the project to BOMA, discuss the use and capabilities of Vistro software, and gather input on project assumptions
- During Task 2: KCI will present the outcome of the Phase 1 analysis and will provide an update on progress for Task 2. This may include preliminary findings.
- During Task 3: KCI will present the prioritized list of project recommendations, including policy changes.
- At project completion: KCI will present final project findings and next steps.

Project management and coordination will be provided for the duration of the project. This includes phone calls and e-mails necessary to accomplish the project objectives, as well as general administration and accounting activities.

Task 7 – Adjustment to TAZs

Knowing that the City has previously invested in a refined component of the Nashville Area MPO's travel demand model, KCI will be able to build on the development analysis conducted as part of this effort to support the continued use of this model if so desired by the City. This process would involve taking all planned and future growth in the study area and converting the development densities into forecasted population and employment growth, which serve as the primary inputs for the model. Future development would initially be calculated at a parcel level and then aggregated to the Traffic Analysis Zones (TAZ) structure currently used in the model. If desired, KCI would also identify modifications to the TAZ geographies and the transportation network needed to account for anticipated changes in connectivity between zones and within the network due to future development.

PROJECT SCHEDULE

Given notice to proceed and contract execution, KCI is prepared to provide these services based upon a twelve-month project schedule.

FEES AND PAYMENTS

The following fees are for the performance of the Work listed in the Scope of Services above, at the location described above. The fees listed in this FEES AND PAYMENTS section do not cover any Additional Work, or any other services which are not specifically described as part of the Work listed in the Scope of Services above.

KCI will invoice for the Work completed monthly on the basis of percentage of work performed. A progress report with an itemized account of project activity will be submitted with each invoice.

Task	Description of Work	Fee
1	Information Gathering and Existing Conditions	\$85,800
2	Project Growth and Future Conditions	\$67,200
3	Project Recommendations and Preliminary Opinion of Probable Cost	\$50,600
4	Functional Plans	\$33,500
5	Vistro Model Software Support and Materials	\$9,200
6	Project Management and Coordination	\$26,600
7	Adjustment to TAZs	\$6,200
	Estimated Expenses	\$11,000
Project Total (Labor Fee and Expenses)		\$290,100

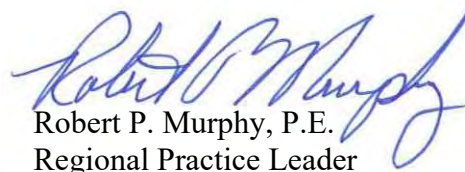
Thank you for this opportunity. We look forward to working with you on this project.

Please contact us if you have any questions regarding this scope of work.

Sincerely,



Beth Ostrowski, P.E.
Senior Project Manager



Robert P. Murphy, P.E.
Regional Practice Leader

CITY OF FRANKLIN, TENNESSEE
PROFESSIONAL SERVICES AGREEMENT
COF Contract No. 2019-0322

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is by and between the City of Franklin, Tennessee, hereinafter referenced as City, and GRESHAM SMITH hereinafter referenced as Consultant, who mutually agree as follows:

DECLARATIONS. City desires to retain Consultant to provide engineering, related technical, and other services in connection with City's project hereinafter referenced as Project. The Project is described as follows:

DESIGN AND POST-DESIGN SERVICES FOR THE
SR-96 (MURFREESBORO ROAD) TRAFFIC SIGNAL IMPROVEMENTS

1. SCOPE OF SERVICES. Consultant shall provide data collection, engineering, and related technical services for the Project in accordance with the Scope of Services ("Services") as found in Attachment A, which shall be considered as an integral part hereof.
2. Consultant shall submit as a part of Attachment A an individual Fee Schedule and a Completion Schedule for the Project based on the detailed Scope of Services.
3. In event of a conflict between this Agreement and the attached document(s), this Agreement shall supersede conflicting terms and conditions.
4. Consultant shall be paid on a monthly basis for work performed, based on the Fee Schedule as contained in Attachment A, in the Lump Sum Amount of Two Hundred Sixty-Nine Thousand Two Hundred Eighteen and 60/100 Dollars (\$269,218.60).

The Board of Mayor and Aldermen Approved this Agreement on the ____ Day of _____, 20____.

TERMS AND CONDITIONS FOR PROFESSIONAL SERVICES

ARTICLE 1. SERVICES. Consultant will:

- 1.1 Act for City in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with standards of competent consultants using the standards in the industry:
- 1.2 Consider all reports to be confidential and distribute copies of the same only to those persons specifically designated by the City.
- 1.3 Perform all services under the general direction of a senior professional employee, licensed and/or registered in the State of Tennessee, when appropriate.
- 1.4 Designate, in writing, the sole Project representative to coordinate with City the Services to be provided, including all contact information.
- 1.5 Unless provided for in the Project Scope of Services (Attachment A), Consultant shall perform all Services with his own forces (employees). Should sub-consultants be proposed to be used in the Project, a listing of said sub-consultants with Services to be performed shall be provided. After approval of this Agreement, no substitute for sub-consultants shall be allowed unless approved by City.
- 1.6 Retain pertinent records relating to the services performed for a period of seven (7) years following the completion of the work; during this period the records shall be available for review by City at all reasonable times.

ARTICLE 2. CITY'S RESPONSIBILITIES. City, or its authorized representative, will:

- 2.1 Provide Consultant with all information regarding the Project, which is available to, or reasonably obtainable by, the City.
- 2.2 Furnish right-of-entry onto the Project site for Consultant's necessary field studies and surveys. Consultant will endeavor to restore the site to its original condition and shall remain solely liable for all damages, costs and expenses, including reasonable attorneys' fees, for failure to make such restoration.
- 2.3 Designate, in writing, the sole Project representative to coordinate with and direct the Consultant, including all contact information.
- 2.4 Guarantee to Consultant that it has the legal capacity to enter into this contract and that sufficient monies are available to fund Consultant's compensation.

ARTICLE 3. GENERAL CONDITIONS.

- 3.1 Consultant, by the performance of services covered hereunder, does not in any way assume, abridge or abrogate any of those duties, responsibilities or authorities customarily vested in other professionals or agencies participating in the Project.
- 3.2 Consultant shall be responsible for the acts or omissions of any party involved in concurrent or subsequent phases of the Project acting upon written instruction issued by the Consultant.
- 3.3 Neither City nor Consultant may assign or transfer its duties or interest in this Agreement without written consent of the other party.
- 3.4 ALLOCATION OF RISK AND LIABILITY; GENERAL. Considering the potential liabilities that may exist during the performance of the services of this Agreement, the relative benefits and risks of the Project, and the Consultant's fee for the services rendered, and in consideration of the promises contained in this Agreement, the City and the Consultant agree to allocate and limit such liabilities in accordance with this Article.

- 3.5 INDEMNIFICATION. Consultant agrees to indemnify and hold City harmless from and against legal liability for all judgments, losses, damages, and expenses to the extent such judgments, losses, damages, or expenses are caused by Consultant's negligent act, error or omission in the performance of the services of this Agreement. In the event judgments, losses, damages, or expenses are caused by the joint or concurrent negligence of Consultant and City, they shall be borne by each party in proportion to its own negligence.
- 3.5.1 SURVIVAL. The terms and conditions of this paragraph shall survive completion of this services agreement.
- 3.6 LIMITATIONS OF RESPONSIBILITY. Consultant shall not be responsible for (a) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project unless specifically undertaken in Attachment A, Scope of Services ; (b) the failure of any contractor, subcontractor, Consultant, or other Project participant, not under contract to Consultant, to fulfill contractual responsibilities to City or to comply with federal, state, or local laws, regulations, and codes; or (c) procuring permits, certificates, and licenses required for any construction unless such procurement responsibilities are specifically assigned to Consultant in Attachment A, Scope of Services.

ARTICLE 4. TERMINATION BY THE CITY. The City may terminate this Agreement in accordance with the following terms and conditions:

- 4.1 Termination for Convenience. The City may, when in the interests of the City, terminate performance under this Agreement with the Consultant, in whole or in part, for the convenience of the City. The City shall give written notice of such termination to the Consultant specifying when termination becomes effective. The Consultant shall incur no further obligations in connection with the work so terminated, other than warranties and guarantees for completed work and installed equipment, and the Consultant shall stop work when such termination becomes effective. The Consultant shall also terminate outstanding orders and subcontracts for the affected work. The Consultant shall settle the liabilities and claims arising out of the termination of subcontracts and orders. The City may direct the Consultant to assign the Consultant's right, title and interest under termination orders or subcontracts to the City or its designee. The Consultant shall transfer title and deliver to the City such completed or partially completed work and materials, equipment, parts, fixtures, information and Contract rights as the Consultant has in its possession or control. When terminated for convenience, the Consultant shall be compensated as follows:
- (1) The Consultant shall submit a termination claim to the City specifying the amounts due because of the termination for convenience together with costs, pricing or other data required by the City. If the Consultant fails to file a termination claim within one (1) year from the effective date of termination, the City shall pay the Consultant the amount the City deems the Consultant is due.
 - (2) The City and the Consultant may agree to the compensation, if any, due to the Consultant hereunder.
 - (3) Absent agreement to the amount due to the Consultant, the City shall pay the Consultant the following amounts:
 - (a) Contract costs for labor, materials, equipment and other services accepted under this Agreement;

- (b) Reasonable costs incurred in preparing to perform and in performing the terminated portion of the work, and in terminating the Consultant's performance, plus a fair and reasonable allowance for direct job site overhead and earned profit thereon (such profit shall not include anticipated profit or consequential damages); provided however, that if it reasonably appears that the Consultant would have not profited or would have sustained a loss if the entire Agreement would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss, if any;

The total sum to be paid the Consultant under this Section shall not exceed the total Agreement Price, as properly adjusted, reduced by the amount of payments otherwise made, and shall in no event include duplication of payment.

- 4.2 Termination for Cause. If the Consultant does not perform the work, or any part thereof, in a timely manner, supply adequate labor, supervisory personnel or proper equipment or materials, or if it fails to timely discharge its obligations for labor, equipment and materials, or proceeds to disobey applicable law, or otherwise commits a violation of a material provision of this Agreement, then the City, in addition to any other rights it may have against the Consultant or others, may terminate the performance of the Consultant, in whole or in part at the City's sole option, and assume possession of the Project Plans and materials and may complete the work.

In such case, the Consultant shall not be paid further until the work is complete. After Completion has been achieved, if any portion of the Contract Price, as it may be modified hereunder, remains after the cost to the City of completing the work, including all costs and expenses of every nature incurred, has been deducted by the City, such remainder shall belong to the Consultant. Otherwise, the Consultant shall pay and make whole the City for such cost. This obligation for payment shall survive the termination of the Agreement.

In the event the employment of the Consultant is terminated by the City for cause pursuant to this Section and it is subsequently determined by a Court of competent jurisdiction that such termination was without cause, such termination shall thereupon be deemed a Termination for Convenience under this Section and the provisions of Section 4.1 shall apply.

- 4.3 Termination for Non-Appropriation. The City may also terminate this Agreement, in whole or in part, for non-appropriation of sufficient funds to complete or partially complete the Project, regardless of the source of such funds, and such termination shall be on the terms of Section 4.1.
- 4.4 The City's rights under this Section shall be in addition to those contained elsewhere herein or provided by law.

ARTICLE 5. SCOPE OF SERVICES. Consultant shall provide the Services as described in Attachment A, Scope of Services.

5.1 By mutual agreement, this Agreement and scope can be amended by the parties. The scope and fee for any additional tasks or services under such amendment shall be mutually negotiated and agreed to in writing prior to beginning such additional tasks or services.

5.2 ENVIRONMENTAL RESPONSIBILITY.

Where drilling/sampling services are involved, the samples obtained from the Project site are the property of the City. Should any of these samples be recognized by the Consultant to be contaminated, the City shall remove them from the Consultant's custody and transport them to a disposal site, all in accordance with applicable government statutes, ordinances, and regulations. For all other samples, the Consultant shall retain them for a sixty (60)-day period following the submission of the drilling/sampling report unless the City directs otherwise; thereafter, the Consultant shall discard the samples in accordance with all federal, state and local laws.

ARTICLE 6. SCHEDULE.

6.1 TIME OF THE ESSENCE. The parties agree that time is of the essence with respect to the parties' performance of all provisions of the Agreement.

6.2 Before executing this Agreement, the Consultant shall have prepared and submitted for approval to the City a Completion Schedule for the Project with milestones for the various stages (tasks) of the Services as outlined in the Scope of Services. The Consultant shall submit and obtain the City's approval for any proposed changes to the logic, durations, sequences, or timing of tasks as approved in the Completion Schedule.

6.3 FORCE MAJEURE. Neither party will be liable to the other for any delay or failure to perform any of the services or obligations set forth in this Agreement due to causes beyond its reasonable control, and performance times will be considered extended for a period of time equivalent to the time lost because of such delay plus a reasonable period of time to allow the parties to recommence performance of their respective obligations hereunder. Should a circumstance of force majeure last more than ninety (90) days, either party may by written notice to the other terminate this Agreement. The term "force majeure" as used herein shall mean the following: acts of God; strikes, lockouts or other industrial disturbances; acts of public enemies; orders or restraints of any kind of the government of the United States or of the State or any of their departments, agencies or officials, or any civil or military authority; insurrections, riots, landslides, earthquakes, fires, storms, tornadoes, droughts, floods, explosions, breakage or accident to machinery, transmission pipes or canals; or any other cause or event not reasonably within the control of either party.

6.4 Should City request changes in the scope, extent, or character of the Project, the fee and the time of performance of Consultant's Services as indicated in Attachment A shall be adjusted equitably.

ARTICLE 7. USE OF DOCUMENTS, DATA.

7.1 All Documents, including, but not limited to, reports, drawings, specifications, and computer software prepared by Consultant pursuant to this Agreement are instruments of service in respect to the Project. The City shall retain an ownership and property interest therein whether or not the Project is completed.

- 7.1.1 USE OF DATA SYSTEMS: The City maintains all rights to data systems and data (including derivative or hidden data such as metadata) created and used by Consultant through information supplied to the consultant by the City.
- 7.1.2 DISCLOSURE OF DOCUMENTS/DATA. City may be required to disclose documents or data under state or federal law. City shall notify Consultant if a request for data or documents has been made and shall give Consultant a reasonable opportunity under the circumstances to respond to the request by redacting proprietary or other confidential information. Consultant waives any right to confidentiality of any document, e-mail or file it fails to clearly mark on each page as confidential or proprietary. In exchange, Consultant agrees to indemnify, defend, and hold harmless City for any claims by third parties relating thereto or arising out of (i) the City's failure to disclose such documents or information required to be disclosed by law, or (ii) the City's release of documents as a result of City's reliance upon Consultant representation that materials supplied by Consultant (in full or redacted form) do not contain trade secrets or proprietary information, provided that the City impleads Consultant and Consultant assumes control over that claim.
- 7.2 By execution of this Agreement, Consultant and his sub-consultant(s) grant the City a royalty-free, perpetual, irrevocable, and assignable license to use any and all intellectual property interest Consultant or his sub-consultant(s) possess to any drawings, details, specifications, documents, and other information created before each of their first involvement with the Project and subsequently incorporated into the Project's documents. City-furnished data that may be relied upon by Consultant is limited to the printed copies that are delivered to the Consultant pursuant to Article 2 of this Agreement. Any copyrighted electronic files furnished by City shall be used by Consultant only for the Project as described herein. City's posting or publication of such documents created by Consultant for City shall constitute fair use and shall not constitute an infringement of Consultant's copyright, if any.
- 7.3 Documents that may be relied upon by City are limited to the printed copies (also known as hard copies) that are signed or sealed by the Consultant. Files in electronic media format of text, data, graphics, or of other types that are furnished by Consultant to City are only for convenience of City, unless the delivery of the Project in electronic media format has been dictated in Attachment A, Scope of Services. Any conclusion or information obtained or derived from electronic files provided for convenience will be at the user's sole risk.
- 7.4 Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within sixty (60) days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files. Unless stated otherwise herein, Consultant shall not be responsible to maintain documents stored in electronic media format after acceptance by City.
- 7.5 When transferring documents in electronic media format, Consultant makes no representations as to long term compatibility, usability, or readability, of documents resulting from the use of software application packages, operating systems, or computer hardware differing from that as required of, and used by, Consultant at the beginning of this Project.

- 7.6 City may make and retain copies of Documents for information and reference in connection with use on the Project by the City, or his authorized representative. Such Documents are not intended or represented to be suitable for reuse by City or others on extensions of the Project or on any other project. Any such reuse or modifications without written verification or adaptation by Consultant, as appropriate for the specific purpose intended, will be at City's sole risk and without liability or legal exposure to the Consultant or to Consultant's sub-consultants.
- 7.7 If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- 7.8 Any verification or adaptation of the Documents for extensions of the Project or for any other project will entitle Consultant to further compensation at rates to be agreed upon by City and Consultant.

ARTICLE 8. INSURANCE.

- 8.1 During the performance of the Services under this Agreement, Consultant shall maintain the following minimum insurance:
- a) General Liability Insurance with a combined single limit of \$1,000,000 per occurrence and \$2,000,000 annual aggregate.
 - b) Automobile Liability Insurance with a combined single limit of \$1,000,000 for each person and \$1,000,000 for each accident.
 - c) Workers' Compensation Insurance Coverage A in accordance with statutory requirements and Coverage B, Employer's Liability Insurance, with a limit of \$500,000 for each occurrence.
 - d) Professional Liability Insurance with a limit of \$1,000,000 annual aggregate.
- 8.2 Consultant shall add the City an additional insured on all policies unless otherwise prohibited.
- 8.3 Consultant shall, upon execution of this Agreement, furnish City certificates of insurance, which shall include a provision that such insurance shall not be canceled without at least thirty (30) days' written notice to City.
- 8.4 No insurance, of whatever kind or type is to be considered as in any way limiting other parties' responsibility for damages resulting from their activities in the execution of the Project. City agrees to include, or cause to be included, in the Project's construction contract, such requirements for insurance coverage and performance bonds by the Project's construction contractor as City deems adequate to indemnify City, Consultant, and other concerned parties against claims for damages and to insure compliance of work performance and materials with Project requirements.

ARTICLE 9. PAYMENT.

- 9.1 City will pay Consultant for services and expenses in accordance with the Fee Schedule proposal submitted for the Project as part of the Scope of Services. Consultant's invoices will be presented at the completion of the work or monthly and will be payable upon receipt. Payment is due upon presentation of invoice and is past due thirty (30) days from invoice date. City shall give prompt written notice of any disputed amount and shall pay the remaining amount.
- 9.2 Consultant shall be paid in full for all services under this Agreement, including City authorized overruns of the Project budget or unforeseen need for Consultant's services exceeding the original Scope of Services.
- 9.3 TRAVEL; EXPENSES

City shall reimburse reasonable expenses, including travel and meals, when specified in the Scope of Services, but only in accordance with the City's Travel and Expense Policy and Procedures Manual. The maximum amount will be applied as of the date of travel and as listed in the per diem reimbursement rates on the "CONUS" website developed by the United States General Services Administration, located at www.gsa.gov [click on 'per diem rates' under the 'etools' category].

ARTICLE 10. MISCELLANEOUS PROVISIONS

- 10.1 EQUAL EMPLOYMENT OPPORTUNITY. In connection with this Agreement and the Project, City and Consultant shall not discriminate against any employee or applicant for employment because of race, color, sex, national origin, disability or marital status. City and Consultant will take affirmative action to ensure that the contractor used for the Project does not discriminate against any employee and employees are treated during employment without regard to their race, age, religion, color, gender, national origin, disability or marital status. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship.
- 10.1.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.2 TITLE VI – CIVIL RIGHTS ACT OF 1964. City and Consultant shall comply with all the requirements imposed by Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d), 49 C.F.R., Part 21, and related statutes and regulations.
- 10.2.1 Consultant shall insert the foregoing provision in all contracts relating to this Project.
- 10.3 NO THIRD PARTY RIGHTS CREATED. City and Consultant each binds itself and its successors, executors, administrators, permitted assigns, legal representatives and, in the case of a partnership, its partners, to the other party to this Agreement and to their successors, executors, administrators, permitted assigns, legal representatives and partners of such other party in respect to all provisions of this Agreement. The Services provided for in this Agreement are for the sole use and benefit of City and Consultant. Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than City and Consultant.
- 10.4 WARRANTIES/LIMITATION OF LIABILITY/WAIVER. City reserves all rights afforded to local governments under law for all general and implied warranties. City does not waive any rights it may have to all remedies provided by law and therefore any attempt by Consultant to limit its liability shall be void and unenforceable.

ARTICLE 11. EXTENT OF AGREEMENT:

- 11.1 APPLICABLE LAW/CHOICE OF FORUM AND VENUE. This Agreement is made under and will be construed in accordance with the laws of the State of Tennessee without giving effect to that state's choice of law rules. The parties' choice of forum and venue shall be exclusively in the courts of Williamson County, Tennessee. Any provision of this Agreement held to violate a law or regulation shall be deemed void, and all remaining provisions shall continue in force.
- 11.2 ENTIRE AGREEMENT. This Agreement, including these terms and conditions, represent the entire Agreement between City and Consultant for this Project and supersedes all

prior negotiations, representations or agreements, written or oral. This Agreement may be amended only by written instrument signed by City and Consultant.

ARTICLE 12. DISPUTE RESOLUTION, BREACH.

- 12.1 If a dispute should arise relating to the performance of or payment for the Services under this Agreement, the aggrieved party shall notify the other party of the dispute within a reasonable time after such dispute arises. During the pendency of any dispute, the parties shall continue diligently to fulfill their respective obligations hereunder. No arbitration or mediation shall be required as a condition precedent to filing any legal claim arising out of or relating to this Agreement. No arbitration or mediation shall be binding.
- 12.2 BREACH. Upon deliberate breach of the Agreement by either party, the non-breaching party shall be entitled to terminate the Agreement with notice, with all of the remedies it would have in the event of termination, and may also have such other remedies as it may be entitled to in law or in equity.

ARTICLE 13. SURVIVAL.

The provisions contained in this Professional Services Agreement shall survive the completion of or any termination of the Agreement, contract or other document to which it may accompany or incorporate by reference or which subsequently may be modified, unless expressly excepted from this Article upon consent of both parties.

CITY OF FRANKLIN, TENNESSEE:

GRESHAM SMITH:

By: _____
Dr. Ken Moore
Mayor
Date: _____

By: _____
Print: _____
Title: _____
Date: _____

Attest:

Eric S. Stuckey
City Administrator
Date: _____

Approved as to form:

Shauna R. Billingsley, City Attorney

Scope of Services

Project Background

The goal of this project is to improve the traffic operations of 13 signalized intersections along SR 96 between Eddy Lane and Arno Road in Franklin, TN.

Design elements of this project may include enhanced vehicle detection, Flashing Yellow Arrows (FYAs), upgrade of existing signal controllers to Advanced Traffic Controllers (ATCs), Connected Vehicle (CV) infrastructure to support Signal Phase and Timing (SPaT) message broadcasting, and ADA and PROWAG pedestrian improvements.

The Gresham Smith team (Consultant) will provide the following professional design services associated with this project:

Project Tasks

Task 1 – Project Management

This task includes the following:

- Prepare project schedule – The project schedule developed using Microsoft Project will include a work breakdown structure to document the relationship between tasks, critical milestones, and the planned duration of each activity. Updates to the schedule will be provided with each progress report.
- Kickoff meeting – Within 5 days of Notice to Proceed (NTP), the Consultant will hold a kick-off meeting with the City of Franklin to review the project scope, schedule, deliverables, communication protocol, and team organization. Meeting minutes will be provided within five (5) days of the meeting.
- Project status meetings – Project status meetings will be conducted at the City of Franklin's Traffic Operations Center (TOC) located at 109 3rd Ave. South, Ste. 133 Franklin, TN 37064, or alternatively by teleconference, to provide detailed updates on the project status.
 - Status meetings will occur at no more frequently than once per month. Consultant assumes that 36 project status meetings will be held over the project duration.
 - The Consultant will organize, schedule, and conduct all project meetings in coordination with the City Project Manager. The Consultant will prepare the agendas, furnish meeting materials, and prepare and distribute meeting minutes assuming one comment review cycle by the City.
 - In addition to these project status meetings, it is anticipated that periodic coordination meetings may be required between the Consultant and the City to discuss project activities and receive direction on project decisions. The Consultant assumes no more than six (6) "coordination meetings" over the course of a 36-month project duration.
- Stakeholder Coordination – Consultant will coordinate with stakeholder organizations anticipated to include the City, TDOT Local Programs, and organizations associated with the project.



- An initial meeting will be set up with the City and TDOT to determine the ADA needs for this project within 30 days of NTP.
- Prepare project progress reports and monthly invoices – Monthly invoices will be accompanied by monthly status reports that include a written description of the work completed over the reporting period, a description of anticipated work that will be performed in the upcoming reporting period, documentation of changes to the project schedule or scope, and note technical, management, or coordination issues.

Task 1 Deliverables:

- *Project schedule*
- *Meeting agendas, meeting materials and minutes for all scheduled meetings*
- *Monthly project progress reports and invoices*

SEAR and NEPA Phase

Task 2 – System Engineering Analysis Report (SEAR)

In conformance with Federal Rule 940 and TDOT Requirements, a SEAR document will be developed to address technology, operations, and maintenance of the proposed system and will include the following:

- Concept of Operations
- System Requirements
- Alternatives Analysis
- Technology Procurement Options and Recommendations
- Agreements and Integration
- System Verification Plan
- Operations and Maintenance Plan

The sub-consultant will provide as needed technical assistance for the SEAR creation.

Task 2A – Concept of Operations

A Concept of Operations (ConOps) will provide the framework for the SR 96 system. This document will include a high-level overview of the system, identify the stakeholders, the elements and capabilities of proposed technologies for the corridor, what the proposed technologies for the corridor will be used for, and how the proposed technologies will be operated and maintained.

The Consultant will conduct one (1) ConOps Workshop that will provide a forum for discussion with the City and project stakeholders and gather input. A sample agenda for this workshop will include:

- Overview
- Defining the goals and objectives
- Defining the operations needs
- Proposed system overview
- Operational/support environment
- Operational scenarios



Following the ConOps Workshop, a draft ConOps document will be submitted to the City for review and comment. The draft final ConOps document will be based on one comment review cycle of the draft document. The final ConOps document will be developed based on one comment review cycle of the draft final document and included as part of the final SEAR deliverable.

Task 2A Deliverables:

- *Workshop Stakeholder list, agenda, and workshop materials*
- *Draft ConOps, and Draft Final ConOps. The Final ConOps will be incorporated and delivered as part of the consolidated SEAR deliverable.*

Task 2B – System Requirements

The System Requirements documentation builds on the ConOps and identifies the functional requirements, applicable ITS standards from the ITS architectures, applicable statutes, regulations, and policies, and notes project constraints. The System Requirements document for this project will include a system verification plan, traceability matrix, and system acceptance plan.

A draft document will be submitted to the City for review and comment. The draft final System Requirements document will be based on one comment review cycle of the draft document. The final System Requirements document will be developed based on one comment review cycle of the draft final document and included as part of the final SEAR deliverable.

Task 2B Deliverables:

- *Draft System Requirements, Draft Final System Requirements. The Final System Requirements will be incorporated and delivered as part of the consolidated SEAR deliverable.*

Task 2C – Alternatives Analysis

The Alternatives Analysis will include an examination into alternative system configurations and technology options that meet the requirements for the system. A maximum of three (3) system options will be developed. The Alternatives Analysis will be a component of the overall SEAR and not a standalone deliverable.

Task 2D – Funding /Procurement Options and Recommendations

The Funding/Procurement Options and Recommendations will include an exploration into the available procurement options and provide the City with recommendations. This will be a component of the overall SEAR and not a standalone deliverable. This component will be incorporated and delivered as part of the consolidated SEAR deliverable.

Task 2E – Agreements and Integration

For this section of the SEAR, the Consultant will work with the City to identify needed agreements and integration activities for the system. This will be a component of the overall SEAR and not a standalone deliverable. This component will be incorporated and delivered as part of the consolidated SEAR deliverable.



Task 2F – System Verification Plan

The System Verification Plan will be a component of the System Requirements document and will identify the applicable ITS standards and testing procedures for the system. This will be a component of the overall SEAR and not a standalone deliverable. This component will be incorporated and delivered as part of the consolidated SEAR deliverable.

Task 2G – Operations and Maintenance Plan

The Consultant will create an Operations and Maintenance Plan that identifies the procedures and resources necessary for operations, management, and maintenance of the system on SR 96. This will be a component of the SEAR and not a separately provided document. This component will be incorporated and delivered as part of the consolidated SEAR deliverable.

Task 2H – SEAR Deliverable

A consolidated draft SEAR will include items 2A through 2G as described above. The final SEAR will be developed based on one comment review cycle of the draft final document.

Task 2 Deliverables:

- *Draft Final, and Final SEAR document submitted to the City, TDOT Local Programs, and FHWA (via Local Programs)*

Task 3 – Prepare National Environmental Policy Act (NEPA) Documents

The Consultant will prepare the NEPA documentation for the proposed project which is anticipated to be classified as a NEPA C-list Categorical Exclusion (CE). The C-list CE will require the preparation of a Purpose and Need Document, coordination with the TDOT Technical Sections, a review of historic structures, and preparation of the C-List CE template documenting that the project meets the criteria outlined in 23CFR771.117(c) and that the project will have no significant effects to the environment.

To support the data collection for the NEPA documentation and SEAR, a preliminary field review will be conducted to identify visible utilities, verify right-of-way, identify potential CV infrastructure locations, identify potential pedestrian improvements for ADA and PROWAG, identify candidate FYA locations, and identify detection needs. A preliminary layout plan for the proposed design will be developed and included within the NEPA documentation.

Task 3 Deliverables:

- *Preliminary layout plan*
- *Technical Studies; final NEPA document*

Task 3A – Preliminary Plans for Environmental Only

As a component of the NEPA documentation, the team will create the preliminary design of the system, which provide an opportunity for the City to provide feedback regarding the preliminary design via one comment review cycle.

Preliminary Plans will include:

- Cover sheet
- Layout sheets

Task 3A Deliverables:

- *Preliminary plans. One submittal.*

Task 4 - Technology Demonstrations

Using the SEAR ConOps and System Requirements as guidelines, the Consultant will coordinate connected vehicle and Automated Traffic Signal Performance Measures (ATSPM) technology demonstrations for the City. These 60 to 90 minute demonstrations will provide the City a time to learn about new technologies that are available and provide a forum to ask questions. The Consultant will work with the City to evaluate what technologies are most appropriate for the needs documented in the SEAR and will use this information as a basis for design and specifications for the project. It is assumed that product vendors will provide all materials to demonstrate their products/technology solutions.

Task 4 Deliverables:

- *Up to four (4) Technology Demonstration Meetings*
- *Technology Demonstration Meeting Notes. One draft submittal for all demonstrations, and a final submittal assuming one comment review cycle.*

Design and ROW Phases

Task 5 – Design Plans

The Consultant will prepare the Preliminary, ROW, and Construction plans using existing pdf and MicroStation drawings supplied by the City from past ITS, signal or intersection improvement projects as well as City GIS data. The intersection plan layout sheets will include existing features and detection and proposed technology. Detail sheets will include requirements for the new detection and signal control devices, including notes, manufacturer installation requirements and drawings. For this task, the sub-consultant will provide as needed technical assistance.

Task 5A – Submittal of Preliminary Plans

Once the Notice to Proceed (NTP) to Design has been issued, the team will submit the preliminary plans for review, which provide an opportunity for the City and TDOT to provide feedback regarding the initial design via one comment review cycle. After responding to review comments via a comment response form, the Consultant will request the NTP for the ROW phase. Comments on the preliminary plans will be incorporated in the ROW plans.

Plans will include:

- Cover sheet
- Layout sheets

Task 5A Deliverables:

- *Preliminary plans. One submittal.*
- *Local Programs Form 5-3 Preliminary Checklist*

Task 5B – ROW Plans

After receiving the NTP for ROW phase, the Consultant will conduct a ROW phase field review that will be used in conjunction with Preliminary Plan phase comments to develop the ROW plans. The initial ROW Plans will be submitted to TDOT and the City for one comment review cycle. The Consultant will respond to initial ROW plan comments in a comment response form and incorporate changes into the Final ROW plans. The Final ROW plans will then be submitted to TDOT and the City with a request for the ROW Certification since no additional ROW is expected for this project.

ROW Plans will include:

- Cover sheet
- Quantity Sheets
- Index of Sheets, Standard Drawings and Abbreviations
- Scope of Work, General and Special Notes sheet(s)
- Layout sheets
- Plan sheets

Task 5B Deliverables:

- *Initial ROW Plans*
- *Preliminary plans comment response form*
- *Local Programs Form 5-3 Initial ROW Checklist*
- *Final ROW Plans*
- *Initial ROW Plans comment response form*
- *Local Programs Form 5-3 Final ROW Checklist*

Task 5C – Construction Plans

After receiving the ROW Certificate, the Consultant will develop the Construction plans. The initial Construction Plans will be submitted to TDOT and the City for one comment review cycle. The Consultant will respond to initial Construction plan comments in a comment response form and incorporate changes into the Final Construction plans. Final Construction plans will then be submitted to TDOT along with the Final Construction Estimate, Bid Documents which include the Specifications (described further in Task 6), DBE Goals, and Bid Advertisement. Additionally, utility coordination documentation will be submitted.

The following components will be added to the ROW plans components as part of the construction plans:

- Detail sheets
 - Cabinet Equipment Table
 - Signal Controller Block Diagrams
 - Ramp and Pedestrian Signals Details, if needed
 - Detection Details
 - FYA Wiring Details
 - DSRC Details
- Traffic Control Plans Details – Advanced Work Zone Sign Layout

Task 5C Deliverables:

- *Initial Construction Plans*
- *Local Programs Form 5-3 Initial Construction Checklist*
- *Initial Construction Plans comment response form*



- *Final Construction Plans*
- *Local Programs Form 5-3 Final Construction Checklist*
- *Final Construction Estimate*
- *Bid Documents which include the Specifications*
- *Form 7-1 DBE Goals*
- *Bid Advertisement*

Task 6 – Develop Engineering Estimate of Probably Cost

The Consultant will prepare an engineering cost estimate for the design of the project. A draft version of the cost estimate will be submitted to the City for comment with the Preliminary, ROW, and Construction plans. The Final Construction Estimate will be prepared and submitted to the City and TDOT as noted in the previous task.

Task 6 Deliverables:

- *Preliminary Cost Estimate, Final ROW Cost Estimate, and Final Construction Plan Engineering Estimate of Probable Cost*

Task 7 –Specifications and Bid Documents

The Consultant will develop specifications for the signal controller, detection, dedicated short-range communications (DSRC) and ATSPM devices that will detail hardware and software requirements, define the Contractor's integration requirements, conditional and final acceptance testing requirements, and Contractor warranty and support requirements. Finally, the specifications will define Contractor required training and documentation. For this task, the sub-consultant will provide as needed technical assistance and develop the DSRC specification.

The draft Specifications will be submitted to TDOT and the City for one comment review cycle. Further, the Consultant will conduct an off-team peer review of the specifications. The Consultant will respond to draft specifications comments in the Final Specifications. The Consultant will also create the Bid Documents, which will include the specifications and Construction Advertisement.

Task 7 Deliverables:

- *Specification Documents (Draft and Final)*
- *Bid Documents (Form 8-1)*
- *Construction Advertisement (Form 8-2)*

Task 8 – Utility Clearance

The ROW plans will be distributed to the utilities as noted by the TDOT Utility office to determine if there are any anticipated conflicts. The goal of the process is to identify utility permits or make-ready work required. The Consultant will track correspondence and collect notification letters (i.e. no facilities, no conflict). Due to the nature of this project, it anticipated that limited or no utility relocations will be needed. The following are activities are anticipated with this task:

- Initial outreach to utilities within the County to determine if they are within the area
- Initial review of ROW plans to determine companies involved and extent of relocation to clear conflicts



- Official notification of utilities and distribution of plans via pdf via Newforma (hard copy upon request only; assume 2 hardcopies will be needed)
- Prepare correspondence
- Coordinate with TDOT Utilities on Certification

Task 8 Deliverables:

- *Utility “No Facilities” and “No Conflict” letters*
- *Utility Correspondence*

Construction Phase

Task 9 – Before and After Study

A Before and After Study will be conducted as part of this task. The Consultant will collect and compile data from the ATSPM system prior to the construction beginning along the corridor and will serve as a baseline. This data will be collected during the weekday AM, Noon, and PM peak periods while public schools are in session. Upon the completion of the construction, data will be collected via the same methodology utilizing the technology deployed. Data collected will include:

- Total travel time
- Running time
- Stopped time
- Average speed
- Number of stops

Collected data will be analyzed to determine emissions and translated to cost savings benefits using FHWA methodology. The report will describe the data collected and summarize this data in an executive summary describing the overall project, and any potential savings in both time and money, including benefit to cost ratios.

The draft Benefit-Cost report will be submitted to the City for one comment review cycle. Further, the Consultant will conduct an off team peer review of the Benefit-Cost report. The Consultant will respond to draft Benefit-Cost report comments in the Final Benefit-Cost report.

Task 9 Deliverables:

- *Draft Before and After Report*
- *Final Before and After Report*

Task 10 – Post Design Services

This task includes anticipated Post Design Services for the project. The Consultant will assist the City appointed CEI with construction phase services, including the following:

- Attend Preconstruction meeting. Assume one meeting.
- Shop drawing equipment review. Assume 2 reviews.
- Request for Information (RFI) responses. Assume 2 RFI responses.
- Review of conditional and final acceptance testing results.

Task 10 Deliverables:

- Reviewed Shop Drawings
- Responses to RFI's
- Review of testing results

Compensation

The following fee is:

	<u>Fee</u>
Labor Plan Design and Specifications	\$ 266,865.00
Expenses	<u>\$ 2,353.60</u>
Total Fee	\$ 269,218.60

Additional Services:

The following are additional services beyond this scope of services that the City may request the Consultant to scope and negotiate at a later time.

- Integration – the Consultant may be requested to support the Contractor with integration of project devices into the existing City of Franklin signal system.
- Software development (dashboard) and integration – the Consultant may be requested to develop and integrate a software platform to integrate the high resolution controller data from the project controllers and create an ATSPM dashboard to report the results.
- Signal timing support – the Consultant may be requested to assist the City in the development and implementation of new signal timings along the SR 96 corridor.

Excluded Items:

- Survey and geotechnical data gathering
- ITS Architecture Update
- Signal Timing Studies
- Updated Coordinated Signal Timing Plans
- Biological Assessments
- Archeological Assessments
- Collection of new traffic counts or turning movement studies
- Traffic Control Plans (TDOT Standards will be referenced on the final plans)
- Utility Relocation Design Services and Plans
- Right-of-Way or easement acquisition, exhibits, descriptions or other related services

October 2019 Capital Projects Status Report

(Transportation, Stormwater, and Parks)

Transportation

Mack Hatcher Parkway Northwest Extension (SR-96 West to Hillsboro Road)	
Project Mngr:	Project Managed by TDOT (COF Liason: Abby Gambill)
Schedule:	DESIGN: Start – August 14, 2007, End– October 2018 (Re-Design); ROW: Start – December 2009, End – November 2018; CONSTRUCTION: Bid – December 7, 2018, End – November 30, 2021* <i>*Denotes Estimated Date</i>
Cost:	DESIGN: \$3,502,501; ROW: \$13,397,520 (Provided by TDOT); CONSTRUCTION: \$45,122,600 (Provided by TDOT) <i>Note: City of Franklin Funding Commitment of \$5,000,000</i>
Status Update:	Construction is on-going.

SR-96 West Multi-Use Trail (Vera Valley Drive to 5 TH Avenue North)	
Project Mngr:	David Hodnett
Schedule:	DESIGN: Start- November 2016, End – June 2019*; ROW: Start – April 2018, End – September 30, 2019*; CONSTRUCTION: Bid--January 2019*, Start - March 2019*; End – December 31, 2020* <i>*Denotes Estimated Date</i>
Cost:	DESIGN: \$167,538; ROW: \$600,000 (Estimated); CONSTRUCTION: TBD
Status Update:	The City's request to construct the trail in state ROW approved by TDOT's Excess Land Committee on September 25, 2019. Once TDOT certifies the ROW process, then the TDOT Local Programs will issue a Notice to Proceed with Construction funding and the project can be let for bidding.

Westhaven Boulevard Traffic Signal	
Project Mngr:	Adam Moser
Schedule:	DESIGN: Start- October 2018, End – August 20, 2019; CONSTRUCTION: Bid – August 25, 2019, Start – November 15, 2019*, End – August 31, 2020* <i>*Denotes Estimated Date</i>
Cost:	CONSTRUCTION: \$591,322.75 (Bid Price)
Status Update:	The project was advertised for construction bid on Sunday, August 25 th . The bid opening was held on September 17 th . A resolution to award the construction contract to the low bidder is scheduled for the November 12 th BOMA meeting.

Transportation (continued)

Franklin Road Corridor (Streetscape) Improvements (Harpeth River Bridge to Harpeth Industrial Court)	
Project Mngr:	William Banks
Schedule:	DESIGN: Start- January 2015, End – July 31, 2019; ROW: Start – April 2018, End – December 31, 2019*; CONSTRUCTION: Bid – January 15, 2020 December 1, 2019*, Start – March 23, 2020 February 15, 2020*, End – June 30, 2022* *Denotes Estimated Date
Cost:	TOTAL: \$14,300,000 (Estimated)
Status Update:	Final design updates are complete. Permits are being acquired. Easement acquisitions are being finalized via condemnation.

East McEwen Drive Roundabout Modifications	
Project Mngr:	David Hodnett
Schedule:	DESIGN: Start – March 2017, End– February 2019; ROW: Start – November 2018, End – April 30, 2019; CONSTRUCTION: Start – June 18, 2019, End – February 13, 2020* *Denotes Estimated Date
Cost:	DESIGN: \$154,405; ROW: \$90,670 CONSTRUCTION: \$1,324,963 (Bid Price)
Status Update:	16" Water line has been relocated, tested, and accepted. Drainage work is continuing on the south side of McEwen.

East McEwen Drive Phase 4 Improvements (Cool Springs Boulevard to Wilson Pike)	
Project Mngr:	David Hodnett
Schedule:	ENVIRONMENTAL: Start – June 2017, End – November 2018; DESIGN: Start – April 2015, End – August 12, 2019; ROW: Start – September 15, 2019*, End – May 30, 2020*; CONSTRUCTION: Bid – June 1, 2020*, Start – June 1, 2020*, End – June 30, 2023* *Denotes Estimated Date
Cost:	ENVIRONMENTAL: \$102,000; DESIGN: \$1,587,000 (Preliminary - \$497,000; Final - \$1,090,000); ROW: \$5,000,000 (Preliminary Estimate) CONSTRUCTION: \$29,057,000 (Preliminary Estimate)
Status Update:	PSAs for appraisal and review appraisals were approved at the September 10 th BOMA meeting. Plans have been sent to TDOT for preliminary and ROW review and approval. Staff is working to schedule a surveyor to perform field staking of property acquisitions. Actual acquisition negotiations will begin once an initial plan review is completed by TDOT.

Transportation (continued)

Columbia Avenue Widening & Improvements (Mack Hatcher Parkway to Downs Boulevard)	
Project Mngr:	William Banks
Schedule:	ENVIRONMENTAL: Start - February 9, 2016, End – February 2018; DESIGN: Start – January 2019, End – December 31, 2019*; ROW: Start– March 1, 2020*, End – October 31, 2021*; CONSTRUCTION: Bid – January 1, 2022*, Start – March 1, 2022*, End – March 31, 2024* <i>*Denotes Estimated Date</i>
Cost:	ENVIRONMENTAL: \$927,668; DESIGN: \$750,000; ROW: TBD; CONSTRUCTION: TBD
Status Update:	Preliminary plans were recently approved by TDOT. The designer is continuing work toward the completion of right-of-way and construction plans (by end of 2019).

Intersection Improvements at Mallory Lane and Liberty Pike	
Project Mngr:	David Hodnett
Schedule:	DESIGN: Start – February 14, 2017, End – March 31, 2021*; ROW: Start – August 1, 2021*, April 30, 2022*; CONSTRUCTION: Bid – May 1, 2022*, Start – July 1, 2022*, End – December 31, 2023*
Cost:	DESIGN: \$229,965; ROW: TBD; CONSTRUCTION: TBD
Status Update:	The PSA for design of the roundabouts was approved at the September 10 th BOMA meeting. A design kick-off meeting was completed Monday, September 23 rd . Design is expected to take approximately 18 months.

Stormwater

Jordan Branch of Spencer Creek (Cool Springs East) Stream Restoration	
Project Mngr:	Jeff Willoughby
Schedule:	DESIGN: Start – May 26, 2015, End – June/July 2018; ROW: May 2018; CONST. (Phase 1): TBD; CONST. (Phase 2): TBD <i>*Denotes Estimated Dates</i>
Cost:	DESIGN: \$113,445; CONSTRUCTION: \$750,000 (Estimated)
Status Update:	Staff is partnering with the HOA to find a solution to move this project forward.

Parks

Southeast Municipal Complex (Park)	
Project Mngr:	David Hodnett
Schedule:	PLANNING: Start – June 2017, End – August 2018; DESIGN: Start – June 6, 2019, End – June 30, 2020* <i>*Denotes Estimated Date</i>
Cost:	PLANNING: \$396,046; DESIGN: \$1,356,656; CONSTRUCTION: TBD
Status Update:	Designs for the park and the entry bridge are underway by Barge and Benesch.

Southeast Municipal Complex (Lockwood Parcel)	
Project Mngr:	David Hodnett
Schedule:	DESIGN: June 7, 2019, End – June 30, 2020* (<i>Dam Rehab Design Only</i>) CONSTRUCTION: TBD
Cost:	DESIGN: \$602,300 (<i>Dam Improvements Only</i>) + TBD (<i>Final Design</i>) ROW: \$500,000; CONSTRUCTION: TBD
Status Update:	The design of the dam rehabilitation is underway by CDM Smith. Topo and geotechnical surveys are almost completed.

Reconstruction of Tennis Courts at Jim Warren Park	
Project Mngr:	David Hodnett
Schedule:	DESIGN: Start – June 2018, End – January 2019; CONSTRUCTION: Bid – February 2019, Start – April 22, 2019, End – October 15, 2019* <i>*Denotes Estimated Dates</i>
Cost:	DESIGN: \$74,575; CONSTRUCTION: \$1,000,416.20
Status Update:	Change Order #1 was approved at the September 10 th BOMA meeting. Work is complete and grand opening is scheduled on October 29, 2019 at 3:30 pm.

Facilities

Municipal Services Complex (Century Court) Improvements	
Project Mngr:	David Hodnett
Schedule:	DESIGN: Start – August 2018, End – January 2019; CONSTRUCTION: Bid – August 2019, Start – September 2019, End – May 2019 <i>*Denotes Estimated Dates</i>
Cost:	DESIGN: \$85,500.00 CONSTRUCTION: \$2,346,347.00
Status Update:	Notice to Proceed was issued to Civil Constructors, LLC., effective September 3, 2019. Work has commenced, and demo is progressing.



HISTORIC
FRANKLIN
TENNESSEE

DATE: October 16, 2019

TO: Board of Mayor and Aldermen

FROM: Eric Stuckey, City Administrator
Michelle Hatcher, Director of Water Management
Patricia McNeese, Utilities Engineer II

SUBJECT: Water and Sewer Projects Status Report

Purpose

The purpose of this memo is to provide information to the Franklin Board of Mayor and Aldermen (BOMA) concerning the status of some of the City's water and sewer projects.

Project Status

- A. Spencer Creek Basin - South Prong Interceptor Upgrade
Project Description: Replacement of approximately 3,827 linear feet of 36 inch sanitary sewer line and 836 linear feet of 8 inch sanitary sewer line along South Prong from east of Mallory Lane to north of Cool Springs Boulevard
Key Dates: Design Start - April 23, 2013; Design Completion – February 2017*; Easement Acquisition - TBD; Construction - Not Funded
*Denotes Estimated Date
Cost: Design - \$337,000.00; Easement - Not Funded; Construction - Not Funded
Funding Source: Design - Sewer Fund; Easements - TBD; Construction - TBD
Status Update: Based on the approved sanitary sewer availabilities for projects upstream from the sanitary sewer crossing at I-65, the scope of this project needs to expand to include a portion of the sanitary sewer east of I-65. The engineering consultant has submitted a proposal on an expanded study on the east side of I-65. Staff is currently working with the engineering consultant on the scope and cost of the proposal to bring to the CIC in November.
- B. Spencer Creek at Franklin Road Sewer
Project Description: Replacement and relocation of approximately 1,462 linear feet of 36 inch sanitary sewer line, 717 linear feet of 12 inch sanitary sewer line and 362 linear feet of 8 inch sanitary sewer line along Spencer Creek from CSX Railroad to northwest of Franklin Road and south of the First United Methodist Church; replacement of 175 linear feet of 8 inch sanitary sewer along the rear of PF Chang's on Cool Springs Boulevard



Key Dates: Design Start - March 11, 2014; Design Completion - June 2015; Easement Acquisition Start - September 2015; Easement Acquisition Completion – October 2019*; Bid Date: January 2020*; Construction Start – March 2020*; Construction Completion – December 2020*

*Denotes Estimated Date

Cost: Design - \$40,000.00; Construction - TBD

Funding Source: Design - Sewer Fund

Status Update: The existing 36-inch diameter sanitary sewer pipe has been CCTV-ed and determined to be a candidate for cured-in-place lining. Amendment No. 1 to the agreement was approved at the October 8th, 2019, BOMA meeting. This releases the consultant to begin revising the existing construction plans to be complete in December for bidding in January 2020. The easement negotiation with the First United Methodist Church has been concluded; it will be signed and recorded upon receipt of the revised document from Law.

C. Old Carters Creek Water Line Improvements

Project Description: Replacement of 2,100 linear feet of 8 inch water line along Old Carters Creek Pike from intersection of Old Carters Creek Pike and Carters Creek Pike to 164 Old Carters Creek Pike then along Hatcher Spring Creek to Carters Creek Pike then east to the water line in Bradford Drive

Key Dates: Design Start - May 12, 2015; Design Completion - July 2017; Easement Acquisition Start - TBD; Easement Acquisition Completion – TBD*; Construction - to be completed in-house by Water Management Department staff

*Denotes Estimated Date

Cost: Design - \$101,278.00; Easements - TBD; Construction - TBD (Materials Only)

Funding Source: Design and Easements - Water Operating Fund

Status Update: This project will be constructed in two phases with the entire job being designed now.

D. Henpeck Lane Sanitary Sewer Project

Project Description: Installation of 5,095 linear feet of 12 inch sanitary sewer line and 1,350 linear feet of 8 inch sanitary sewer line along a tributary of Five Mile Creek from Ellington Drive to Henpeck Lane

Key Dates: Design Start - July 2017; Design Completion - August 2018*; ROW/Easement Start - February 2018*; ROW/Easement End - December 2018*; Construction Start – June 2019*; Construction End – July 2020*;

*Denotes Estimated Dates

Cost: Design - \$176,000; ROW/Easement/Contracts - \$374,000.00; Construction - \$3,203,238.00

Status Update: Construction on the west side of Lewisburg Pike is complete. The crossing of Ellington Drive is complete. The contractor is working at both ends of the project – the manhole at Tract 4 and the manhole at Tract 9.

E. Water Reclamation Facility Modifications Project



Project Description: Extensive upgrades to the existing sanitary sewer treatment plant, including new headworks structures, equalization basin, odor control systems, biological nutrient removal basin splitter box, improvements to the reclaimed water pump station, onsite piping improvements, two-channel ultraviolet disinfection system, alum storage and feed system and a new solids treatment facility

Key Dates: Design Start - February 12, 2013; Design Completion - May 2018; Construction Start - November 2018; Construction End - October 2021;

*Denotes Estimated Dates

Cost: Design - \$ 7,806,980.00; Construction - \$132,890,000.00

Status Update: 50% of the tank's wall section of the new equalization basin has been completed, which is the 10 million-gallon storage tank that will hold raw wastewater as it enters the facility during wet weather events. Approximately 60% of the walls of the new headworks building are constructed and work on the second slab elevation has begun with formwork being installed and rebar placed. The Electrical Distribution Center is under roof and MCCs are being set and rough wired. Solids Process Building slab has been constructed.

F. Holiday Court Pump Station Project

Project Description: Upgrade of the existing pump station at the end of Holiday Court and the 6-inch force main

Key Dates: Design Start - January 10, 2017; Design Completion - December 2017; Easement Acquisition Start - April 2018; Easement Acquisition Complete – February 2019*; Bid Date – January 2020; Construction Start – March 2020*; Construction End – September 2020*

*Denotes Estimated Dates

Cost: Design - \$89,569.00; Easements - \$18,000.00; Construction - est. \$564,000.00

Status Update: Continuing to work on the bid documents to incorporate comments from Law Department. WMD staff has a meeting with Purchasing next week to set the date for the bid opening.

G. Redwing Farms Reclaimed Water Line Project

Project Description: Upsize of the existing reclaimed water line from an 8-inch to a 12-inch from the Redwing Farms wastewater pump station to the connection at Berry Farms. The WMD Service Division will be performing the construction on the line.

Key Dates: Design Start – July 2019; Design Completion – August 2019; Construction Start – September 2019*; Construction End – February 2020*

*Denotes Estimated Dates

Cost: Construction – materials \$146,463.00

Status Update: Construction began September 30, 2019 and approximately 1,600 linear feet has been installed.

H. Redwing Farms Reclaimed Water Booster Station Project

Project Description: Design and construction of a new reclaimed water booster pump station



on the Redwing Farms wastewater pump station site.

Key Dates: Design Start – December 2019*; Design Completion – April 2020; Bid Date – June 2020*; Construction Start – August 2020*; Construction End – March 2021*

*Denotes Estimated Dates

Cost: Design - \$150,000.00; Construction - est. \$400,000.00

Status Update: Staff returned the consultant's proposal with comments to be addressed.